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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. 1.—*Scraps of American Medical Literature.* By The Editor.

We have no inclination to attempt a survey, at the present time, of our medical literature. In the estimation of some, we have nothing worthy of the name among us, except what is of foreign origin. Others think differently, and suggest the propriety of having their views impressed upon the attention of the public, as a measure of professional respect, and self protection. Were the views of the former correct, were it true that we have, as a nation, flourished in every thing except medical literature, and that we owe all of what we are to the literary labors of foreigners, it would be a very humilating subject of contemplation. Our national existence, it is true, is but of a moment's duration, compared with that of many in the eastern world, and it could not be expected that we should have, as yet, the circumstances, or the individuals, necessary to the construction of a medical literature, as perfect and as extensive as might be desired. Still, we have something of the kind among us, and perhaps, if it were, rude as it is supposed to be, examined into a little, the result might be to lull the croakings on the one hand of those whose enjoyment consists in taking hold of things by the rough handle, and encourage those on the other, who are possessed of the worthy desire to make the facts out fairly.

Perhaps, but few would think, on the spur of the occasion, of a better definition of Medical Literature, than that, *it is the knowledge imparted through medical books;* that it is the channel through which every thing connected with our profession passes from mind

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to mind; that it is the medium through which the pearls which have so long lain on the bottom of the intellectual ocean find their way to the surface. Through it we look back over the profession to the Adam of our science, and from him down to the Moseses and Solomons who have made their marks and disappeared from the theatre of human effort. What, had it not been for our medical literature, would we have known of the mythological existence of Chiron, who is the reputed preceptor of Æsculapius, Hercules, Bacchus and Achilles, and who performed the first surgical operation? or of Hippocrates, the father of rational medicine and surgery? or of Aristotle, who named the aorta, and showed that the blood vessels centered in the heart? or of Erasistratis, who invented so many surgical instruments? or of Xenophon, who was the *first* to control hemorrhage with a tourniquet? or of Celsus, the contemporary of Horace, Virgil and Ovid, and who was the *first* to describe lithotomy, and who gave to the world his eight books, “*De Medicina*”*?* or of Galen and the seven hundred and fifty essays which he wrote on medical subjects, and in defence of the doctrines of Hippocrates? or of Aretæus, who *first* employed *blisters?* or of Paracelsus, who, although a genius, and a man of uncommon energy and ability, was perhaps, the father of most of the opposition that beset at an early period regular systematic medicine? or of Van Helmont, and his fancied “archæus”? or of Riverius, who illustrated in his *Seventeen Several books* the state of medical ignorance in France during the seventeenth century? or of Boerhaave, whose reputation was as wide as the continent upon which he lived? or of Sydenham, who redeemed the science in his day, from much of the ignorance and superstition that surrounded it? or of Sanctorious, who weighed himself and every thing he ate and drank for a period of thirty years, in order to get data for estimating the quantity of the excretions? To this list we might add one fully as long, of more modern origin, and without being invidious, include in it such men as have figured during the present century in England, France, Italy, Austria, Russia, Prussia, the United States, etc.; and still ask, what would we know of these men and their contributions to science, were it not for our *medical literature*— our book knowledge of persons and things medical.

On turning our attention to things immediately around us, we are impressed, of course, not with the extent or elaborateness of what we have in the way of literature, that may be regarded as strictly our own; but we are with its character, taking into consideration the length of time in which we have been engaged in building it up, and the many disadvantages that have surrounded us. Settled in the general by people, pennyless and homeless, our country has been the theatre of efforts principally directed to the acquirement of things more immediately connected with the necessities of life. This is true not only of most that make up the catalogue of human pursuits, but it is also true of things medical and literary. All the disadvantages incident to the felling of an almost impervious forest, the extermination of a race, (who were only conquered by extinction,) and the engagement in a colonial war of some ten years' duration, have surrounded us, and taken up most of the time of our brief national existence. It might not be uninteresting in this connection, to notice a few points connected with the origin and progress of our profession in this country.

The *first* physician we have any record of as being engaged in the practice of his profession in America, was Dr. Walter Russel. He came from England in 1608, and settled in the Colony of Virginia. Dr. Russel appears to have been the only representative of the medical profession in the "New World," for the period of the first twelve years. In 1820, Dr. Samuel Fuller, a deacon in the church of the Rev. John Robertson, arrived at Plymouth, in the first ship with the Puritans. Dr. Thomas Thatcher came over from England in 1635, and has the credit of having published the *first* American medical work. It was entitled, "*A brief guide in the small pox and measels.*" In 1682, we have the *first* effort at the practice of physic in Philadelphia, by two Welsh physicians, Dr. Thomas Wynn and brother; and in 1700, the *first* in New York City, by Dr. John Nicholl, a graduate in Edinburgh. The *first* medical author of Boston, was Dr. Benjamin Colman, a clergyman, who wrote a pamphlet defending *Inoculation.*

The *first dissection* recorded in the United States, was that of Drs. John Baird and Peter Middleton, who dissected a criminal for the instruction of students.

The *first* systematic practitioner of midwifery, was Dr. James Lloyd, who studied under John Hunter, and on coming to this country settled in Boston.

Dr. Wm. Shippen, of Philadelphia, has the honor of being the *first* Professor, and in connection with Dr. John Morgan, gave the *first* course of lectures, which I believe is regarded as the foundation of what is now so well known as the *Pennsylvania University.*

Dr. Nathan Smith was the *first* and perhaps the *only* individual who ever undertook to fill all the chairs in a Medical College, a labor which he performed for twelve years, at Dartmouth College.

Such seem to have been some of our beginnings, and from these, we have proceeded along, in our own way, to what we are at present.

Our efforts at book-making, have never at any time been great. The first writer who undertook to say anything about the climate of the new world was Dr. Colden, of New York city, who wrote an account of the climate of the city, in 1720, recommending it as a suitable place for invalids predisposed to phthisis pulmonalis. In 1725, Dr. Boylston was handsomely received at the Royal Society of London, for having published "An Historical account of Small Pox Inoculation in New England." Dr. Nathan Williams, in 1730, wrote on the practice in small pox, and in 1732, Dr. Walton published an Essay on Fever, which, perhaps, was the *first* effort in the western world to untie a knot, that up to the present time has resisted all effort. The same year, Dr. John Tenant, published an account of *Polygala Senega*. In 1743, Dr. John Mitchell, of Virginia, published "Letters on the causes of different colors of people in different climates," and in the same year, Dr. Clayton published the "*Flora Virginiana*" which was republished in Leyden, by Gronovius, in 1762. Dr. John Jones, in 1776, published a volume on wounds and fractures, which was of much service to the army surgeons during the revolution. Such are some of our first efforts at book-making.

We now approach a period of our history, when every thing of a literary character was necessarily suspended in the struggle for human rights, and the desire to become an independent nation. As soon, however, as this trouble subsided, we see the energy and industry of some who had been very conspicuous in the civil and military movements of the revolution, now directed, among other things, to building up something in the way of medical literature. Among those to whom we allude, perhaps none was more conspicuous than Dr. Benjamin Rush. Diversified as were the things which occupied his strong and vigorous mind, and exciting as were the times in which he figured, he nevertheless found no little time to write on the subjects connected with medicine and the collateral sciences. Indeed, his works embrace a wider range than do those of any other American author, for he was not content with medicine proper, or the sciences collateral to it, but he was, perhaps, the most eminent

Theorist that we have had among us. In his day, his writings exercised a great influence and did much toward giving character to the medical profession the United States. At home and abroad, indeed, his services were appreciated, and the voice of the profession every where, was heard in his praise.

As a writer, Dr. Rush was surrounded with many difficulties. Every thing, in his day, lay scattered around in a state of chaos. No naturalist had been in the country to take things by the horns and lay them straight. Almost every thing pertaining to the natural history of the country, its climate, its endemic and epidemic diseases, had to be encountered, as it were, for the first time, and an attempt made at their description. Upon such subjects, and others of a kindred character, he wrote in the neighborhood of fifty essays. Some of these were of a character called forth by the times, as for example the one entitled "An account of the Influence of Military and Political Events of the American Revolution upon the Human Body;" also, "An Inquiry into the Natural History of Medicine among the Indians of North America, and a comparative view of their Diseases and Remedies, with those of civilized nations." Another one of a character with the times, was entitled, "Observations on the Duties of Physicians, and the Methods of Improving Medicines, accommodated to the Present State of Society and Manners in the United States." Besides such subjects, Dr. Rush wrote an Etiology, somewhat systematically, although he was without the statistics necessary to correct conclusions. Among his efforts of this character, his "Account of the Climate of Pennsylvania and its Influence upon the Human Body," may be noticed; also, "An inquiry into the Influence of Physical Causes upon the Moral Faculty." To such papers, quite a number may be added upon the epidemics of the times, among which small pox and yellow fever were elaborately considered. We may notice further his "Volume of Lectures on the Institutes and Practice of Medicine," and, also, "Medical Inquiries and Observations on Diseases of the Mind."

In these allusions to the literary labors of Dr. Rush we have not attempted an enumeration of the various papers which emanated from his pen. He was, without doubt, one of our most voluminous, and in his day, philosophical writers. Unlike what now obtains, his labors were not concentrated on any one subject, exhausting thereon all the energies of his mind. The times, as we have seen, admitted of no such course. Intellectual labor was too scarce, and the subjects which needed elucidation, too numerous and pressing to be passed over without some notice.

Considered in some respects, Dr. Rush may be regarded as the archetype of American physicians, and of American Medical Literature. The boldness of his views, their latitude, the energy and vigor of his practice, so impressed the profession of his day, that the outlines of these traits are still visible in our medical character. We do not, however, mean to say that as a profession, we are adherents to the distinguished pioneer, or that we agree with him in half the views he so enthusiastically and eloquently maintained. Certainly not. His speculations, for example, upon "debility" as the cause of all diseases, on "life" as being a "forced state," together with many other such doctrines, have not even the merit of being abstract truths or ingenious philosophy. They are a heterogeneous, ill-adjusted assemblage of assertions, as unintelligible as can well be imagined, injurious to him in his own researches, and to every one with whom they have had any currency.

It is not, therefore, in such things, that there is any similarity between Dr. Rush and physicians of the present day. We regard his theorizing as unnecessary and unprofitable. But it is in his zeal, his industry, his efforts to lay hold of and investigate all things that surrounded him, and make the most of them, that the resemblance is most striking.

In dismissing this brief notice of Dr. Rush, we can but allude to the high position he occupied for the many good qualities of his head and heart. Noble and generous in all his intercourse, he was a benefactor, a philanthropist, and a favorite with all who had the pleasure of his acquaintance; and, perhaps, our profession has seldom, if ever, displayed more heartfelt sorrow than at his death; which, as all know, took place in April, 1813, in the 68th year of his age. His mind was truly American. Cast in the largest possible mold, it was adapted to the broad theatre in which it was designed to move; and it moved with the majesty of the Mississippi, and encountered the difficulties it met, with the force of a Niagara current. When, indeed, he concentrated its mighty energies upon the various and difficult subjects that surrounded the profession in his day, many of which, as has been stated, were new, not only to him, but to the world, the result had in it the *vitality of an American effort.*

Cotemporary with Dr. Rush, and for some considerable time associated with him in teaching, and as a consequence, in the effort to build up something in the way of medical literature, were a number of other gentlemen that have filled a large space in the public eye. Into any thing like an elaborate notice of the labors of these, it is not our purpose to enter. We cannot omit to observe the fact that, instead of writing, as did Dr. Rush, on general subjects, their attention was confined more to particular departments, the sciences, which together make up the Medical Science.

Among those to whom we allude, is Wistar. He succeeded Dr. Shippen in the chair of Anatomy in the University of Pennsylvania. Having lectured on Chemistry and Physiology for several years in the College of Philadelphia, and for a time previous to the death of Dr. Shippen, served as adjunct Professor of Anatomy, he entered upon his duties with good qualifications, and a fine prospect of future usefulness. Seeing the necessity of having a work on Descriptive Anatomy, suited to the exigencies of the times, he was not long in undertaking the task of furnishing one. In truth, he had his lectures so well digested and arranged, that in 1812, they appeared under the title of "*A System of Anatomy,*" (2 vols.) This work, the first of its kind in the United States, embraced also, an abstract of what was then known on Physiology. Considered as a literary production, it took a high rank, and as a text book soon displaced others upon the same branch. It has stood the test for accuracy and usefulness, longer than any other, of any kind, which has emanated from the American press. Its fifth edition was edited by the late Dr. Horner, Professor of Anatomy in the University of Pennsylvania, with notes and additions; and the *ninth* is now before the public, entirely remodeled, and illustrated by more than two hundred engravings, by Pancoast, Professor of Anatomy in Jefferson Medical College. In the department of special Anatomy, the work has undergone little or no change, nor has it needed any, since it emanated from the hands of its illustrious author. In the microscopical and chemical branches, and also in physiology, it has been, by its late editor, brought somewhat up to the times, and may now be regarded as being among the most available before the profession. Besides his System of Anatomy, Wistar was the author of some papers, learned and well calculated to give him reputation. Among these were his "Memoirs of the Ethmoid Bone," and the "Remains of an Animal of the Bos Species," also "Remarks on the Fever of 1793."

Of the age of which we have been speaking, Dr. William P. Dewees, who was Professor of Obstetrics in the University of Pennsylvania, was also an author. Few men wrote more, or on a greater variety of subjects. Among his first efforts was his "System of Midwifery;" after which he wrote a volume on the "Diseases of Females," and one on the "Diseases of Children," and quite a considerable one on "Practical Medicine." His first three works passed through a number of editions, one of them *ten*, each of the other two *seven*, and were very popular. His Practice of Physic fell still-born from the press. As a writer, Dewees has been severely criticised. It cannot be denied that there is much in his style that is inelegant, verbose; and that his works abound in dogmatisms, and are almost destitute of pathological details. He led off in his favorite department, obstetrics, in Philadelphia, and perhaps practiced more in that line than any one individual has ever done in America. He was, in truth, *the* obstetrician personally of Philadelphia, and by his writings, of the continent upon which he lived. This circumstance made him bold, confident and authoritative, qualities that have been ignorantly condemned without regard to the circumstances under which he wrote. To our mind, Dewees was the man in his department for his day, and we doubt very much whether Denman with all his system, or any of our moderns, with all their advantages, have done more for midwifery.

From the position we occupy, it is an easy matter to look back upon authors who wrote only a few years since, and find fault with their matter and manner. We are a *fast* people, and many of our books that have only been written a few years, require now to be entirely remodeled or pass to the dominion of the "things that were." How many of those now in use will be on the literary carpet at our next edition of progress? Such things should be taken into consideration, in pronouncing upon the works of the past.

The greatest blemish in the works of Dewees is their deficiency in pathological details, or rather in *morbid anatomy*. Now, when it is recollected that this is a branch of science of comparatively recent origin, there should be no surprise in not finding it invoked to any very great extent by any of our authors in the first quarter of the present century. It is very problematical whether the author before us is more obnoxious to censure in this respect, than others of his day, certainly not more so than a number of them.

Another writer of the times of which we have been speaking, is Dr. N. Chapman, so long before the public as Professor of the Institutes and Practice of Medicine in the Pennsylvania University. The first and most voluminous of his works, as all know, is entitled, "Elements of Therapeutics and Materia Medica." This work (2 vols.) passed through some four or five editions, and then was neglected by its author, and became superseded by the labors of other men upon the same subject. Dr. Chapman wrote a volume of 384 pages, on "Thoracic and Abdominal Viscera;" and one also of 450 pages, on "Fevers, Dropsy, Gout," etc. As a writer, Chapman has had, in some respects, few equals in our country. While his style must be regarded as being exceedingly florid, his sentences are nevertheless always marked with clearness, strength, and harmony. The matter with which his works are filled, although in some respects adapted to the times, was not marked by that progressive spirit with which he was surrounded during the latter part of his life, and which is the characteristic of our times. Really, Dr. Chapman, notwithstanding his early industry, seemed, after he passed the meridian of life, to stand still while the age shot by him. On some of the later improvements in medical science, he looked with perfect indifference. Although he wrote on Thoracic Diseases, he paid but little attention to Physical Diagnosis; and it is said he was in the habit of speaking lightly of it on the score of availibility. All things however considered, Chapman, together with Thatcher, who preceded him, did much to pave the way to a knowledge of indigenous remedies. His "Elements of Therapeutics and Materia Medica" contains much valuable information, and had new editions appeared at the proper times, it would have been the work on that subject for the country. The style in which the author's views are expressed, for example, on the *modus operandi* of medicines, and the familiarity exhibited with every phase of "Solidism" and "Humoralism," show what he could have done if he had made the effort.

Although it was our intention to allude to but a mere sample of the labors of those who contributed, in an early period, to the formation of our literature, we cannot omit, in connection with what we have said, to notice briefly the writings of Dr. Eberle. He was the author, as all know, at a comparatively early day, of a number of works. Among these are his "Practice of Physic," "Materia Medica and Therapeutics," "Diseases and Physical Education of Children," and "Notes for Students." All of these works have passed through a number of editions, and although written sometime since, new editions are still called for. The German was Dr. Eberle's mother tongue, and he cultivated the medical literature of that country more than any other American physician. His habits were those of laborious bibliothecal research; and, as a consequence, when his works were written, they were enriched with fullness of detail. Every author, from Hippocrates down, he eviscerated, for the purpose of obtaining whatever he regarded as being necessary to his purpose.

A characteristic of the writings of Eberle is an absence of *Ultraism*. In his two most meritorious works, "Practice of Physic," and "Materia Medica," both written at a time when there was much controversy in regard to the *modus operandi* of medicines and other questions of a similar character, he displays the traits of a well balanced philosopher, carefully considering the "*pro et con*" of every question encountered. The same is true of his views in regard to the pathology and treatment of disease. He has never, indeed, been known to go off at a tangent on any subject. We are aware that his writings, on account of their conservative modest character, have been criticised, have been regarded as not exerting the best kind of influence. It would be well, however, for those who have made these objections, to survey the former fields of theory and dogmatism, and see what there is left of them that is acceptable to any of us at the present time. Dr. Eberle's greatest strength, in our judgment, is displayed in his modesty and reserve with reference to questions admitting of diversity of opinion, and which, from their very nature, are incapable of being resolved. He died at his residence in Lexington, Ky., at the age of 49, having been the most voluminous medical author of his age in America.

We might continue our notice of American authors much further, and say something of Physic, Cox, Caldwell, Dorsey, Nathan, Smith, Cooke, Oliver, Griffith, Horner, Beck, Forrey, Drake, and others, who have passed from among us, and when we were through with those, we might turn to those among the living who have been, and who are now engaged in the preparation of professional pabulum; but we are admonished that volumes would be required for such a task.

Our design, however, in the commencement was to pay some little attention to the contributions of the late Dr. Drake, but we find that we have already occupied more space than at first designed, and shall therefore be brief.

To the great Mississippi valley Dr. Drake sustained a very intimate relation. Educated entirely here, being among the first of its population, witnessing all the various and unparalleled changes through which it has passed for the last half century, there seemed to be a propriety in his being identified with its literature.

All are now familiar with the character of the inhabitants who first settled the "Western Country." For such an enterprise, Nature had to make her greatest and most liberal effort in the way of compounding together the materials of soul and body. Dwarfs or pigmies, or even ordinarily constituted specimens of humanity would have been of but little service in directing the star of empire westward. The occasion required men great, intellectually, morally, and physically. A new world was to be depopulated and repopulated. Nature, to use a figure, naturalized, and law, order, civilization established, and made to grow with the growth, and strengthen with the strength of the people.

Fitted for just such a field was Dr. Drake. In the parcelling out of matter and mind he was very liberally dealt with in the outset, and circumstances, and his own industrious habits, did the rest. He possessed not a classical education. Raised up at a period when colleges were scarce, and inconveniently situated, he had not the opportunity of taking a regular course in elementary instruction. But he was, nevertheless, a well educated man—educated into a knowledge, intimate, and comprehensive, of the circumstances, persons, and things that surrounded him. His knowledge was not confined to any one department, to which he seemed to have a kind of natural proclivity, but extended more or less to every thing.

With the old and enlightened nations there seems to be little versatility of talent among their distinguished men. Generation after generation follows in the footsteps of its predecessor. Labor, business, science is divided and cut up to accommodate the desires and tastes of the people who often follow some particular branch throughout life without scarcely knowing that there is any thing else going on in the world around them. Great results are supposed to be attained in this way, and the individuals who are connected with them get a world-wide reputation for wisdom, talent, genius, &c. They may be wise, talented, etc., with reference to the particular branches cultivated, as is Louis in Pathological Anatomy, and as was Berzelius in Chemistry, and Physic in Surgery, while upon other things their knowledge may be very limited. This kind of mono-wisdom, if we may be permitted the use of such a term, has been very much over-estimated. Possessed of it, men are frequently reckoned as being a head and shoulders above their fellows, whose knowledge is more general, when, in reality, if the stock or amount of each was measured, there might be no difference at all. The branches of science of which the medical is made up, have a kind of co-relation to each other. An individual is less strong, efficient, and available, or, if it is preferred, has less sense, that is of use to himself and others, who has concentrated all his energies on any one of them, than the one who has the same amount of knowledge, though made up of a portion of all the different kinds that surround him. The one will be practical, the other, most likely, not; the movements of the one will be the result of a comprehensive survey of the whole ground; the movements of the other the result of reasonings founded on a limited sphere of operations.

We are aware that the general opinion is, that *versatility* and *profundity* are incompatible—that the individual whose knowledge extends to a great many different things is not apt to be posted up on any. We see no reason why this should be the case. The habits of observation brought into requisition and cultivation, for general purposes, cannot but be available when directed in a particular channel. Observation is the same whether exerted upon matter in mass, such as makes up a continent, or upon an atom of one of the chemical elements; upon an elephant, or upon one of his blood globules. John Hunter was none the less profound in surgery, because his knowledge extended to every department of medical science; or Wistar any the less of an anatomist because he was a chemist and an eminent practitioner of medicine; or Franklin any less of a philosopher, because he was a great statesman, or because he was the author of some of the best aphorisms on domestic economy that has ever appeared, or finally, because a was a practical printer. On the contrary, is not the individual whose knowledge extends to a variety of subjects, who has, like Franklin, for example, embraced the occasion to make himself acquainted with every thing, however common-place or insignificant, really better qualified than any other to investigate a speciality and appreciate its relations to other things, and especially to utility?

These views we design to preface our further notice of Dr. Drake as an author. As previously remarked, he came not to the performance of his labors clothed with the accomplishments of a classical education in the usual sense in which that term is understood, but with a finished education so far as a knowledge of all the things necessary to his purposes was concerned. These he had studied with great industry and care for a long peried. For a period of more than twenty years he conducted the "Western Journal of Medicine," a business which afforded him a fine opportunity to cultivate the habit of composition, and learn the art of distinguishing between *true* and *false* facts.

The object of the work upon which he spent the last thirty years of his life, was to do what he could to illustrate the diseases of the great region in which he lived from infancy to old age, and which he styled the "Interior Valley of North America."

In attempting the accomplishment of a work so vast in design, he found himself surrounded with difficulties at every step. It would have been very convenient for him to have set down in his office, and, as some others have done, occupy the leisure hours that could be stolen from the duties of practice, in making a compilation to serve as the basis of his work. This he did not choose to do. He saw in this broad valley much in regard to its diseases, but imperfectly set forth in the works in common use on practical medicine, most of which have been written under circumstances very different from what obtains here, and by individuals, some of whom scarcely knew, from personal observation, of the existence of some of our most prevalent types of disease. Again, in attempting to set forth something tangible in the department of Etiology, he might have found it very convenient, as others have done, to refer to Cold, East Winds, Humidity of the Atmosphere, Vicissitudes of Temperature, Idio-misasmata, Koino-miasmata, and other agents of a similar character, and having a kind of stereotyped reputation in the causation of disease. Instead, however, of doing this, he adopted a plan which, whether or not fully successful in his hands, must commend itself to every one as being philosophical; and, if patiently and carefully invoked by those whose tastes direct them in investigations of the kind, will be productive of no ordinary results.

This plan consisted in making his work, as far as possible, the result of personal observation. He travelled extensively over the region, through, indeed, some eighteen degrees of latitude, and nearly as many of longitude, observing all that he could himself, and collecting from resident physicians and scientific gentlemen, every thing that he thought had a bearing upon his purpose. The facts collected related to the Geography of the region, its Geology, Hydrology, Botany, Topography, Meteorology, in short, to every thing pertaining to the soil and climate. Besides, he every where noticed the habits of the people, the different *Varieties*, (Caucasian, Indian, and African,) and how each are affected by juxtaposition, the types and forms of disease most prevalent with each race in the different seasons of the year, etc. Digested and classified, the facts derived from these different sources, are made to serve as the basis of his work.

How far Dr. Drake has been successful in his attempt to elucidate our diseases, or rather the attempt to indicate the method by which this may be accomplished, is a question upon which, like many others, each one claims the right of judging for himself. Among those who have claimed this right at home and abroad, there is great unanimity of opinion expressed. Our journals, as far as we have noticed, with but a single exception, have spoken of the work in terms of the highest praise. Foreign reviews have pretty uniformly spoken in the same strain.

The single exception to which we alluded is the Kentucky Medical Recorder, one of our exchanges. In the leading article of the April No., which purports to be a review of GROSS "On the Results of Surgical Operations in Malignant Diseases," the author* not only takes occasion to differ with Gross, and attempt a ridicule of his positions, but he also embraces the occasion to bear his testimony generally in favor of European authority, and against American.

"Our Medical Literature," he remarks, "is not, taking it altogether, so precious and immaculate an offering as to challenge the indiscriminate devotion of American physicians. Indeed, there are some very shabby specimens of authorship among it, which cannot become substitutes for kindred works from abroad, without an infinite deal of adroit puffing, and pretty sharp scolding into the bargain, if the present experiment in that method of securing patronage shall prove effective."

"It would be an admirable instance of discrimination, to be sure, to prefer the opinions of a babbling historiographer of disease, who had spent the most of his life in running about the country collecting its medical gossipry, to those of such mature, assiduous, and philosophical practitioners as Holland, and Macartney, and Watson."

The phrase "babbling historiographer" is designed, as we understand it, to apply to Dr. Drake. He was in the habit of making numerous visits through the country, for the purpose of describing

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* The author has not thought proper to attach his name to his article. Well enough.

Topographical and Climatic peculiarities, and conversing with physicians in regard to its diseases. But we confess that, "babbling historiographer" is a queer kind of term to apply to a method of medical investigation, which Hippocrates occasionally adopted, as well as many of our most distinguished men from him to Marshal Hall, who has just left our country with a budget of information collected in a similar way. We had all along supposed that such a course was proper until the suggestions to the contrary met our eye. If the author of the criticism would have the medical information of a country, such as we have been speaking about, collected together at all for the purpose of benefitting humanity, there are other reputed methods of doing it, that perhaps would suit him better. One of these is to wait for it to come by intuition; another one is to go into a closet and put the imagination to work to manufacture it; or if either of these do not suit, perhaps going into the clairvoyant state, by which it is said observations can be made over all the world in the lapse of an hour or two, may accomplish the result. Either of these modes are about as reasonable as the critic's objections to the plan pursued by Dr. Drake. Badinage aside, we have never noticed in our brief career a more uncalled for or unjust assault upon any writer than is exhibited in the instance before us. No doubt the author of it is one of those who possess the faculty of treasuring up and aggregating together small particles of enmity, wrath, jealousy, all of which have, perhaps, by some careless or unintentional movement of Dr. Drake, in former times, been thrown into a state of effervesence in the critic's little organism, and hence he now embraces the opportunity to let off his *plus* of carbonic acid gas.

The author of the article in the Recorder suggests that the soft place in a medical man's pate would never be more prominent than when he would be found preferring the writings of Drake to those of Watson, Macartney, and Holland. We confess no great familiarity with the labors of these individuals. Of the three, the writings of Watson on Practical Medicine are most familiar to the medical public on this side of the Atlantic, and perhaps he is a fair sample of the excellence to which the writer in the Recorder alludes. Now, for Watson we confess a great respect. His book, which is used in this country as a System of Practice, is, however, nothing more than a "Course of Lectures," prepared for the students at King's College, London. With the exception that it expresses what should enter into a course of Lectures in very quaint and agreeable style, it has nothing about it that is remarkable, or that differs from other compilations of its day. Bating a very few things, which attach more to the progress of science than to an author, the work is inferior to that of Eberle on the same subject. Indeed, it is less accurate, less full in details, for its day, than was that of Eberle, for the period in which he wrote. Besides, its confident, authoritative mannèr contrasts strongly with the modesty and caution of Eberle.

Between such works, therefore, as Watson and Drake, there are no points of comparison. The former is a text-book, designed for students and those just commencing the practice of medicine, and, to its purpose is very well adapted ; the latter is an original philosophical work that enters into an elaborate and learned consideration of every agent that would be likely, in one of the broadest valleys of the world, to assume the form of a cause of disease. To the department, indeed, of Etiology, the first volume, the only one yet before the public, is almost entirely given up; but a few pages in the latter part are devoted to a consideration of diseases, and these only such as are most intimately connected with the region. As a consequence, it appears to us that the scope of this work has not been comprehended by the critic in the Recorder. It never was designed by its author to take the place of such works as those to which he has thought proper to compare it; and, in our estimation, an individual could not have given a greater evidence of his lack of capacity and want of cultivation, than to suppose that such was the case. The mistake could not have been greater, had the critic confounded the objects of getting up a philosophical treatise on the structure of language, with one designed to learn children to spell and read.

In conclusion, we say that all who desire to post themselves up on the relation of our diseases to the soil, climate, habits of living, etc., in this broad valley—the "Interior of North America,"—and who desire also to lay the foundation of correct habits of observation, should possess themselves of Dr. Drake's work. No individual with any sense will give the work a careful perusal without, not only deciding in its favor, but like Stille in his Report of 1850, on Medical Literature to the American Medical Association, and the editor of the British and Foreign Medico-Chirurgical Review, awarding to it the highest rank in medical literature. In the language of the latter, "*The work is one that would do honor to any country.*"

Art. II.—*Rupture of the Uterus at the fifth month of Utero-Gestation.*—By A. Metz, M. D., Rome, O.

On the 14th day of June, 1854, I was requested to meet Dr. Caples of Rome, in consultation, at the residence of Mr. Rossetter, where I arrived in a few minutes after, and found Mrs. R. lying on her back on the bed, with hurried respiration; pale; in free perspiration; the surface quite cold, and the pulse almost imperceptible. She complained of an intense pain in her left iliac region.

The following history we obtained from the patient partly, and from her husband:

Mrs. R. aged 20 years, had been married eight months, and for five months she had believed herself enciente. For several months previous to the above date she had had several attacks of pain and heaviness in her back and iliac regions, as is common to women laboring under uterine congestion, or irritation. Those symptoms, however, were not so severe as to compel her to take her bed, nor send for her physician. On the afternoons of the 12th and 13th days of June, she experienced some pain in the left iliac region, to which, however, she did not pay much attention. On the 14th, she enjoyed her usual health, and made a call on one of her neighbors, from whence she returned at 5 o'clock, P. M., and soon after she stepped into her own door, in walking across the floor, she suddenly felt an acute and "sickening" pain in her left iliac region. She sunk into a chair, perfectly helpless, where she was found a few minutes afterwards by a neighboring lady, and placed in bed, and in a few minutes afterwards Dr. Caples saw her, and in less than a half hour after the attack, I found her in the above condition.

Before my arrival Dr. Caples had given her a dose of morphine and placed a sinapism over the painful region.

By the vaginal examination the os uteri was found not any dilated, and the neck in a condition common to that stage of pregnancy. On feeling through the walls of the abdomen, nothing abnormal could be detected, but the pressure caused great pain and faintness.

The *emergent* occasion called for a speedy diagnostic conclusion,—and that conclusion was, that she had been laboring under extra-uterine pregnancy, and that the ovum had become detached, and the shock on the system from such detachment, with the consequent hemorrhage, was speedily causing her death. *Gastrotomy* was deemed out of the question, as the patient was not in a condition to live through the operation.

To support her as long as possible, morphine, brandy and ether, were administered. In an hour she said: "The pain is much better, but I feel *so* sick!" She continued to sink; the breathing became more hurried, and the pulse made its last flickering effort about four hours after the commencement of the attack.

Post Mortem—Twelve hours after death, an incision was made through the *linea alba*, and as soon as the peritoneum was divided, a considerable quantity of blood escaped. The first object that presented itself was the bag of membranes *not enveloped* by the uterus, and containing rather a large quantity of amniotic fluid, and the fœtus. I could not find the uterus until after I had ruptured the membranes and removed the fluid and fœtus, when by making traction on the cord, it was brought up into view, about one-fourth the size of the bag of membranes, and somewhat firmly contracted on the *placenta* which it contained. There was a rupture extending from the fundus to the left Fallopian tube, through which the fœtus with its enveloping membranes, had passed.

The uterus was considerably atrophied, and any part of it could be torn with facility, between the fingers. The peritoneal covering of the uterus was not involved in the softening process, and possessed more tenacity than the uterus itself. All other parts within the pelvis appeared healthy.

Mrs. R. ever had been of a chlorotic appearance, and somewhat emaciated. Her parents both are of feeble constitution, and she was true to nature in copying after them.

It is my opinion that the ramollisement was caused by general enervation and anemia; or, in other words, the supply of nervous stimulus and of healthy blood was insufficient to supply the extra demands of the uterus during gestation,—thus starving the uterus until its healthy structure gave way. It would have been interesting to examine the arteries leading to the uterus, and also the condition of the heart and other organs, but this the circumstances did not permit.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art. I.—*On Cholera.*—By Dr. Milroy.

The reappearance of this formidable pest has revived many of the old fears respecting it, but these are not quite so well grounded as many alarmists would have them to be. All knowledge in the matter is not mere empiricism. There is indubitable evidence that cholera originates in the same hot-bed with typhus. There is much evidence that the two diseases are members of the same great class of fevers; — and Dr. Cormack only adds fresh proof to this conviction, by the view which he has recently advocated, that "cholera is a fever, intimately related to those fevers which depend on malaria."

Not much new light has been shed upon the immediate cause of cholera. The only novel suggestion is that of Dr. Snow,— that the disease is propagated by germs contained in the cholera evacuations, which germs are distributed through the air and in the water which is used for household purposes, in consequence of the want of proper attention to cleanliness. The swarms of flies which have been noticed at Newcastle during the present epidemic, and which were noticed in the epidemic of 1832 at Montreal, by Dr. Moore, and about the same time in a village near Edinburgh, by Dr. Knox, may possibly have something to do with the matter. They seem, at least, to mark one phase of that blight in vegetation and murrain among cattle, which has preceded the cholera scourge, and which still attends upon it. The fact is curious under any circumstances. The account of the swarms at Newcastle is by an anonymous writer to *The Lancet,* who states that he is not a member of the medical profession. The cholera was at its height at the time referred to,— September 21, 1853. The writer proceeds:—

The air in certain parts of the town is literally filled with a small fly with large wings, slightly tinged with green. I especially instance a space extending from the top of Northumberland Street, in this town, to the town moor, and even across the moor. The numbers of this fly, were, I found, greater over a sort of open drain at the end of the moor, which is crossed by the road more than half a mile from the town, there being merely a dwarf parapet to prevent any one falling in. In fact, this fly appeared to me to be spread generally over the district, and where the town commences, there the insects are more confined in space, and crowded in a dense cloud, and therefore more apparent.

I am not at all an alarmist, but I never in all my life saw anything like the quantity of this fly which I saw this afternoon when I went out for a walk before dinner. It was not a mere cluster of little clouds which could each be encircled in a hat, but a dense column, extending in space beyond the power of vision to discover where it commenced and where it ended. I palpably walked into it and out of it, as I have done in and out of a London fog. I shall never forget it. What is to be expected from the death and decomposition of this mass of insect matter?

The clearer notions about the local origin of cholera, and of the intimate relations subsisting between the disease and the various forms of fever, has resulted in clearer notions upon the subject of *prevention*. These have shown sufficiently that it is in ventilation, in drainage, in personal cleanliness, and in other measures of the same kind, and not in quarantine, that any rational hopes of safety must rest. Dr. Gavin Milroy,* however, has collected some additional facts in proof of the futility of quarantine. He writes:

The whole history of this formidable pestilence is so interesting and instructive on all points of epidemiological inquiry, that it must ever occupy a very prominent place in every attempt to ascertain the laws which influence the development and diffusion of wide-spreading diseases. No epidemic, moreover, has been so minutely and extensively observed, and of none have we such varied and thoroughly trustworthy records. We can trace its career almost step by step, and with something of the connected sequence of an historic narative, from the time when it first—after having been for ages, for all that we know to the contrary, limited to one district of Asia, viz: Hindostan—began to assume the character of a great migratory pestilence, and go forth, at the bidding of Almighty Power, upon its mission of warning and judgment, to the ends of the earth. Its course and progress can be followed on the map as we follow the track of any of those hordes of the human race which, breaking loose from their place of long abode in some remote corner of the East, spread themselves of old over the face of the European continent. We can mark the advances of the invading foe from country to country; we can tell how long it was on its successive marches; the dates of its arrival in different parts, the rapidity of its movements, the length of its stay, the places which it ravaged, and the very districts in each place upon which its chief fury fell. We know the means that were taken in every country that was invaded, to avert the stroke, to keep the enemy out, or to resist its progress and mitigate its ravages; and we know, too, the amount of success or benefit which attended the efforts that were made. We know that the Russian government, in 1831, having tried quarantine and other like measures, to protect different parts of its dominions, speedily found their utter inefficacy, and abandoned all attempts of the sort; that the Austrian Emperor formally declared that his government "had committed an error in adopting the vexatious and worse than useless quarantine and cordon regulations against cholera," frankly admitting that it did so before the nature of the disease was rightly understood; that Prussia, too, having in vain tried the same expedients, was forced to give them up; that in our own country measures of the most extraordinary stringency to prevent the introduction, and to arrest the spread of the pestilence, were at first recommended and attempted to be carried out, and that they proved so utterly valueless that they were promptly discontinued, and the government of the day intimated, in the speech delivered from the throne, more than incredulity as to their use and expediency; that the French Academy of Medicine formally declared their opinion to the same effect; and that transatlantic experience, both in the United States and Canada, in 1832, testified to a similar result. We know that, in the following year, the disease found its way into different ports of Spain, notwithstanding a rigorous quarantine; that, in 1834, it eluded the vigilance of the health officers at Gibraltar, as yellow fever had done in former years; also at Stockholm and other ports in Sweden, whose former immunity had been attributed to the stringent precautions of defense which had been taken; that, two years subsequently, Genoa, with its well-appointed lazaretto and numerous quarantine staff, failed in its attempt at exclusion: and that Naples and Rome were equally forced to acknowledge the impotence of all their efforts. Nor was Malta more fortunate. Hitherto it had escaped, in consequence, many persons believed, of its insular position, and the strictness and efficiency of its quarantine establishment; and its exemption at a time when the pestilence was in Egypt on its one hand, and in Gibraltar and the south of Spain on its other, might certainly, with some show of reason, lead those, who form their opinions of epidemic diseases from the observation of what is going on in one or two limited localities, to this conclusion. But dismal experience now baffled the fond expectation, and proved the insecurity of the trusted means of defense.

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*Association Medical Journal, July 22, 1853.

Such were the lessons taught by the first world-wide migration of Asiatic cholera. After 1837, the pestilence ceased from the face of Europe for the next ten or eleven years — although scattered cases occurred every now and then in the various countries which had been affected, and a certain choleraic impress, so to speak, on the character of febrile and other diseases continued to be frequently observed.

The dark cloud once more appeared in the eastern horizon in 1845. Ere long, it became larger and more threatening, and steadily advanced in its march of destruction westward, following pretty nearly the track of its former career, and setting at defiance all mechanical attempts at exclusion where these were again attempted. Again did the quarantine authorities of this country issue some detentive regulations against vessels arriving from infected or suspected parts on the continent; but these, as will be probably remembered, were promptly abrogated, upon the recommendation of the General Board of Health, then recently instituted. The policy of this step was fully recognized by the London College of Physicians, whose well-considered opinion stands in the following words: "Cholera appears to have been very rarely communicated by personal intercourse; and all attempts to stay its progress by cordons or quarantine have failed. From these circumstances, the committee, without expressing any positive opinion with respect to its contagious or non-contagious nature, agree in drawing this practical conclusion, that in a district where cholera prevails, no appreciable increase of danger is incurred by ministering to persons affected with it, and no safety afforded to the community by the isolation of the sick." The Report of the Commissioners of Health in Ireland on the cholera epidemic of 1849-50, proclaims the same very important practical conclusions; and the medical authorities in Scotland have, I believe, emphatically recorded their opinions to a like effect. After such concurrence of judgment among the medical profession in this country, it is unnecessary to allude to that of our brethren abroad. It is all but unanimous; except, perhaps, in Spain and the Italian

States, where other motives, besides those of truth and conviction, are well known to influence the judgment of officials upon such matters. Nor is it undeserving of notice that, although these countries profess to place the greatest reliance on quarantine measures, and certainly carry them out with the greatest rigor, the experience of the recent epidemic has again shown their inefficacy against invasion. Malta, which, although a British island, may be regarded as truly Italian as regards her quarantine establishment, was again visited with cholera in 1850.

As far as I am aware, it has not been alleged by any person that it was then imported by shipping. Nor have the endeavors of the Spanish *guardas* to keep out the pestilence from Cuba, where the quarantine regulations are of the utmost stringency, been more successful. This was the only island in the West Indies that suffered during the first epidemic in 1834. In 1850, the enemy again found its way in by some channel that has never been discovered ; and the development of the pestilence in Jamaica towards the end of the same year, could certainly not be traced to any neglect or violation of the quarantine, to whose agency the immunity of the island during the former epidemic had been ascribed.

Notwithstanding these facts, such is the dread of this plague in countries which have hitherto escaped its visitation, and such has hitherto, from long habit, been the vague and general belief that new diseases may be kept out by a system of rigorous medical police, just as interdicted articles of merchandise may be excluded by custom-house officers and coast guards, if these men will but do their duty, that the most extraordinary measures have been resorted to, in different places, within the last year or two, for the purpose of presumed self-defense. For example, two years ago, at Denmark, a quarantine of forty days was imposed upon one of our ships of war, crowded with troops too at the time, simply on the ground that she had come from Kingston in Jamaica, although no disease existed in that town at the date of her departure, nor had a single case of sickness occurred on board during the voyage. This was, certainly, a precaution with a vengeance ; and might, I need not say, have led to disastrous consequences to the unfortunate *detenus*, had not the captain wisely determined to go to another colony, where he might communicate with the shore, until the appointed time had expired for the landing of the troops at Demarara.

Something of the same sort recently occurred also at the island of Mauritius ; so that you see what views are being still entertained, and acted upon too, by some of our countrymen abroad. Let us not, therefore, boast of our superior enlightenment in matters such as that now under consideration, or be so prompt, as we are apt to be, to rail at the ignorant obstinacy and blind prejudices of foreign states, in refusing to go along with us in effecting the reform of various practices, however opposed these practices may be to the conclusions of scientific research and the acknowledged results of experience. Let it be remembered that the inconsistencies of our own government have been often so flagrant, that foreigners may well call upon us to look at home, instead of setting ourselves up as their guides and instructors. They may remind us that after two formal declarations of the inefficacy of quarantine to avert the cholera, an order was issued, no farther back than last September, from our Council office, re-imposing what was called a "Quarantine of Observation" in our own harbors, on vessels, on board which was "any person or persons actually suffering from cholera, or who had been suffering from that disease within the five days previous to the arrival of the vessel in port;"—such persons to be detained on board the vessel, and the vessel to be kept in quarantine "for such period as the medical officer employed to visit the sick might judge necessary for the security or preservation of the health of the community on shore."

The question of treatment is less satisfactorily determined, but even here there are some points on which valuable light has been shed. Bleeding and transfusion, hot baths and cold sheets, sinapisms and ice, inhalations of oxygen and inhalations of carbonic gas — the most opposite things and everything,— calomel, opium, salines, nitrate of silver, acetate of lead, creasote, quinia, steel, and almost every other drug in the Pharmacopœia have been recommended in turn. The treatment by sulphuric acid, however, is that which seems to be of greatest promise. This treatment we have tested to a considerable extent at the Westminster Hospital in cases of choleraic purging. These cases, which have been very common during the last six months, many of them attended with depression, almost amounting to collapse, with violent cramps in the body, and frequently in the legs, we have treated invariably with half-drachm doses of dilute sulphuric acid, with a drachm of the compound tincture of cardamoms, and a little peppermint water, and the result has been almost immediately beneficial. The constant answer of the patient has been that the first dose had relieved, and the second and third stayed the complaint. We have not had to treat a case of extreme cholera, but so satisfied are we with the results of the treatment in cases almost as bad, that in any case, however bad, we certainly should give the acid every quarter of an hour, with brandy and water internally, and heat externally. Nor is this practice quite empirical, for if this acid acts beneficially in hemorrhage, it may be supposed to act similarly in cholera, the serous discharge of which (to borrow an idea of Sir Henry Marsh) may be called *a white blood hemorrhage.* Several writers have called attention to this acid treatment of cholera during the past half year, particularly Dr. Fuller.*

In the summer of 1851, (writes Dr. Fuller,) the attention of the Profession was directed to a strange and newly-discovered property of sulphuric acid. That which had been regarded as a frequent source of belly-ache and purging, was vaunted as a certain cure for these evils, and medical men were called upon to examine and report upon this novel anti-cholera specific. It was not, however, till the month of September, 1851, that I had an opportunity of testing its efficacy in the cure of true choleraic symptoms. In that month, two most urgent cases of choleraic diarrhœa, attended by extreme collapse, violent and incessant cramp, pinched features, rice-stool evacuations, and matters resembling chicken-broth rejected from the stomach, were admitted about the same time into St. George's Hospital. Had these cases occurred in the autumn of '49, they would have been designated cases of Asiatic cholera; they differed in no respect from genuine cholera, and were entitled cases of choleraic diarrhœa simply because cholera was not then prevalent as an epidemic. In both these instances I administered sulphuric acid with complete success; and, as the action of the remedy could be attested by pupils and others, who witnessed the success of the treatment, I published in the *Medical Times and Gazette* (January 10th, 1852,) a detailed account of the effects observed, together with the general result of my experience. It amounted to this — that the dilute sulphuric acid of the Pharmacopœia, administered in half-drachm doses, repeated at short intervals, has a powerful and immediate influence over the disease. The vomiting and purging cease, and the cramps subside, sometimes after the second, more usually after the third or fourth, doses of the medicine. The attack may leave the patient weak, and usually does so, in proportion to its severity, and the length of time which has elapsed before the administration of the remedy is commenced; but within three or four hours, the disease is arrested, and convalescence follows speedily. Indeed, in ordinary cases, the change is effected with such marvellous rapidity, that he who in the morning is so utterly prostrate, in the evening experiences little ill effect from his fearful seizure.

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*Medical Times and Gazette, Oct. 1, 1853.

I had hoped that this circumstantial report, backed as it was by the result of my own experience, extending at that time to twenty-seven cases, and as it has since been by the concurrent testimony of several practitioners in different parts of the country, would have led to a recognition of the extreme value of this treatment in all instances of choleraic diarrhœa, if not of cholera; at all events, it seemed but fair to presume that testimony so decided, in favor of a remedy so cheap, so harmless, so extremely simple, so uniformly successful, and producing its successful and striking results within so short a time of its administration, would at least have insured a trial of its virtues.

My own conviction is, that in sulphuric acid we have an antidote — a specific — against choleraic diarrhœa, if not against the worst forms of cholera, as powerful, as energetic, and as certain in its effect, as in cinchona bark, or quinia, against a paroxysm of ague. In bilious diarrhœa, and in certain chronic diarrhœas, it is of little or no avail; and, in some, though in very few, according to my experience, it gives rise to pinching pain in the abdomen; but in epidemic diarrhœa, in acute autumnal diarrhœa, if I may so term it, and in more decided choleraic diarrhœa, I have known no single instance of its failure; indeed, the more choleraic the diarrhœa, the more speedily are its curative effects produced. This fact will appear of greater value when it is known that I have notes of its administration in above ninety such cases, many of which have occurred among my own patients at the hospital or elsewhere, and some in the practice of my friends.

With this, however, even more than with other remedies, success depends upon the mode of administration. Given at intervals of three or four hours, it fails in exerting any curative influence in severe cases, and is seldom of much avail, even in milder cases; and to insure its beneficial effects, it should be exhibited in full doses, repeated at much shorter intervals. When I first began to give it, I ordered two doses to be taken within the first hour, and a dose to be repeated every hour afterwards. But recent and more extended experience, together with the close and eager observation of its influence on my own person, has convinced me that, even in ordinary cases, twenty minutes form a sufficient interval between each dose. In severe cases, five or six doses may be given with advantage within the hour; and should any dose be rejected by the stomach, another should be administered at once.* Rarely, however, is any dose rejected except the first, and the rejection of that is by no means common. While loathing the sight of other liquids, the patient, after he has tasted the first dose of the medicine, very generally craves for its repetition, and drinks it with avidity.

As the stomach is very irritable, and the acid taken in simple water is, under any circumstances, extremely palatable, I never mix it with syrups or other matters; and I strongly suspect the warm aromatic spices, with which some of my friends have flavored it, are additions by no means agreeable to the patient. Unfortunately, I have had some personal experience in this matter, and so strongly was my distaste to the medicine excited by such flavorings, that for the future, whenever I am the patient, I shall certainly put my veto upon them.

The effects produced by this remedy are very remarkable. Sometimes, after the second dose, more commonly after the third, and almost always after the fourth dose of the medicine, the patient experiences a grateful sense of warmth at the epigastrium; heat returns to the extremities; the nausea and vomiting immediately cease, even if they have not been arrested already; the purging is stayed, the cramps subside, and the countenance resumes its natural appearance. Very generally perspiration breaks out, and the patient goes to sleep, and awakes refreshed, though feeling somewhat weak. The other symptoms betoken a like amendment. The tongue, which before was dried and furred, or shrivelled, becomes moist and but slightly coated: the evacuations from the bowels assume a healthy color, and are accompanied by an unusual disharge of bile ; and the pulse regains its normal steadiness.

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* Mr. Buxton of Great George Street, Westminster, to whom the profession is greatly indebted for having been the first to call attention to the anti-choleraic properties of sulphuric acid, recommends the administration of half-drachm doses every quarter of an hour in severe cases. If those gentlemen who make trial of the remedy so strongly recommended by Mr. Buxton would use it as they ought, in the manner, and in the dose he directs, and administer it only in proper cases, we should seldom, if ever, hear of its failing to arrest the course of the disease. In every instance within my own knowledge, in which it has failed in its efficacy, the blame has been chargeable upon those who have administered it, rather than upon any want of virtue in the remedy itself. They have either given it in insufficient doses, or else in cases of bilious diarrhœa, with foul breath and loaded bowels, which would have been benefitted by a brisk purge of calomel and rhubarb.

Such being the case, it is unnecessary, in mild or ordinary instances, to have recourse to any further treatment. With due precaution as to over-exercise and fatigue, and strict attention to the amount and nature of the diet during the next few days, so as to allow the stomach to recover its wonted energy before its powers are again fully taxed, the patient usually recovers without let or hindrance. The bowels act regularly without the assistance of medicine, and the dejections are of a healthy color and consistence. But in severe cases, if care be not taken to maintain the good effects already produced, a relapse may occur, or recovery may prove tardy. The patient, though no longer troubled with diarrhœa, may digest imperfectly, and suffer greatly from nausea. For some time after these severe attacks, the secretion of bile takes place irregularly, and the bowels become costive or irritable, and the motions dark-colored and offensive. Hence it is sometimes expedient to follow the sulphuric acid by two or three grains of blue pill, or a grain of calomel, administered at bed-time for a few successive nights, taking care during the day to impart tone to the stomach by the exhibition of some light, bitter infusion, combined with potash and ammonia, small doses of tincture of rhubarb, and, if necessary, a little chalk. By some such means as these, all unpleasant after-symptoms are prevented, and the patient proceeds steadily to convalescence.

On several occasions, it has occurred to me to try whether the same effects might not be produced by continuing the use of sulphuric acid at intervals of six or eight hours. But the result of the experiment has not been encouraging. In some few instances the patient has improved steadily, but occasionally he has experienced a relapse, and has generally been longer arriving at perfect health than under the plan already indicated. Hence, as soon as the urgent symptoms have been subdued—i. e., after the first few hours—I usually discontinue the acid, and, if necessary, have recourse to the treatment above recommended as most conducive to the maintenance of its good effects.

The only other point to which we would direct attention, relates to the injection of salines into the veins in certain cases of cholera. Dr. Owen Rees has written upon this practice,* and his remarks and cautions are of considerable value to those who may be disposed to carry it into effect. Dr. Rees writes:

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* The Lancet, Oct. 1, 1853.

As the cholera has again visited this country, I venture to direct the attention of the profession to a point of considerable importance as respects the application of one of the remedies for the disease. With the view of recovering some of the worst cases, and when other remedial means have been unsuccessfully tried, practitioners have occasionally injected saline fluids into the veins. As this proceeding has been attended with great advantage in several recorded cases, and has produced in nearly all a temporary good effect, it has appeared to me that had the injected fluids been composed in more strict accordance with the chemical and physical constitution of the blood than was the case, we might have obtained advantages from the injections very far exceeding those we have on record.

With regard to the chemical constitution of the fluid, it would appear that we can scarcely venture to interfere with the organic constituents of the blood, nor imitate the animal extractives and protein compounds of the circulating fluid, in order to supply them if deficient. There is, however, no occasion for this in Asiatic cholera, for the evacuations from the intestinal surface, which destroy the healthy characters of the blood in that disease, appear to contain but little organic matter, being chiefly made up of water holding the salts of the blood in solution. Thus Vogel and Wittstock agree in describing cholera motions as containing intestinal mucus, traces of albumen, and the ordinary salts of the blood, with carbonate of soda somewhat in excess. The analysis of cholera blood again points clearly to the necessity of supplying more especially salts and water, if we desire to restore it to the healthy standard.

With these facts before us, it is obvious that if we inject the veins at all, a solution of the salts of the blood is indicated in cases of Asiatic cholera: and it would seem well that those who may think it advisable to have occasional recourse to that plan of treatment for the recovery of severe and advanced cases, should keep a mixture of saline ingredients, combined in the proportions (or as nearly so as possible) observed in healthy blood. In order to answer the above requirements, I would recommend the following powder to be prepared, and kept ready for solution:—Chloride of sodium, three ounces; phosphate of soda, one ounce; carbonate of soda, one ounce and a half; sulphate of soda, half an ounce.

As regards the physical peculiarities of the fluid for injection, it is quite as important that its characters in this respect should be attended to as that its chemical constitution should bear its proper relation to the blood. The specific gravity and temperature of the injection will require to be carefully adjusted before we can expect to put our patient under the conditions most favorable for recovery when mixing it with the blood. With regard to temperature, but little need be said; 98 deg. Fah. is necessary, as being that of healthy blood; and I would only remark, that it should be determined by a correct thermometer, and not by one of those cheap instruments with which the market is just now unfortunately inundated. The specific gravity should be adjusted by gradually diluting a strong solution of the saline mixture above described, with small portions of distilled water, at the temperature of from 58 to 63 deg. Fahr., occasionally testing it with a saccharometer, (the ordinary instrument used in the examination of urine,) until the instrument indicates a specific gravity of 1030. This being attained, the fluid has merely to be brought to the temperature of 98 deg. Fahr. to fit it for use.

It is not my intention to enter, on this occasion, upon the reasons why it is so absolutely necessary to attend to the specific gravity of the injected fluid, further than to state that I have adopted that of the serum of the healthy blood, which has a specific gravity such as acts on the blood corpuscles by producing a gradual endosmosis, and thus avoid the evil effects which solutions varying much from the same weight inflict on those bodies.

In conclusion, I would beg leave to refer those who may be interested in this question of the effect produced on the blood by solutions of various specific gravity, to a paper by Samuel Lane and myself, contained in the thirteenth number of the *Guy's Hospital Reports*, and also to remarks having reference to the physical structure of the blood, contained in the second edition of my work on the "Blood and Urine."

P. S.—Since writing the above, I have seen, in the tenth volume of the *Medical Gazette*, the prescription for preparing the fluid used by Dr. Lewin and others for injecting the veins, and have ascertained, by experiment, that the specific gravity is so low as to endanger the integrity of the blood-corpuscles if mixed with the blood. This danger is increased in Asiatic cholera, inasmuch as the corpuscles, owing to the drain of fluid which has occurred, contain a more concentrated fluid than in health, and will therefore be more easily destroyed by the presence of fluids of low specific gravity.

ART. II.—*From a Review of* DR. ROBIN'S "*Natural History of the Parasitic Vegetables which grow on Man and on Living Animals;*" *and of* DR. BAZIN'S "*Researches into the Nature and Treatment of Tinea;*" *by* DR. E. A. PARKES.

[It may be observed that all the vegetables which grow on living beings are low forms of Algæ, or Fungi.]

Most of these plants are composed of simple cells, or of cells placed side by side; the unicellular algæ being distinguished from the unicellular fungi by containing chorophylle or some analogous substance, and usually one or more colored vesicles. The more highly formed algæ are composed of interlaced filaments (*Trichomata,*) simple or ramified, cylindrical or flattened, and containing colored molecules; and of a reproductive system—viz: vesicles *sporangia, conceptacles* and spores (*sporidia.*) The fungi are represented by filaments, at first simple, then ramified, and formed by a single elongated cell, or more rarely, by several cells placed end to end (*mycelium.*) The reproductive system is constituted by spores, which are seated on a receptacle, either at once or by the mediation of certain special structures, or are contained in a distinct vesicle (*sporangium.*)

It would lead us too far to go into the minute anatomy of these plants, nor shall we attempt an account of the various genera and species which are found on the lower animals. We shall content ourselves with enumerating those which are found on the bodies of men.

The conditions of growth of the parasitic plants on human bodies are the same in all other cases. Whenever the normal-chemical processes of nutrition are impaired, and the incessant changes between the solids and the fluids slacken, then if the parts can furnish a proper soil, the fungi will appear.

The soil upon which these plants grow is for the most part composed of epithelium or cuticle, acid mucus, or exudation; acidity, although favorable for their growth, is not indispensable, since some of the cryptogamia grow in an alkaline or neutral ground, as on the ulcerations of the trachea. On the skin, and in the buccal and pulmonary cavities, the plants are exposed to atmospheric air, and many of the fungi absorb oxygen, and emit carbonic acid. In the intestines, the nature of the gas is somewhat different; but some species grow here also. Humidity and warmth are important conditions of growth, and these, of course, are always to be found in connection with the animal body.

An useful division of the subject for our purpose is afforded by the anatomical seat of the cryptogamia on the skin, or on the mucous membranes of man.

A. Cryptogamia on the skin.—Ten varieties have been noted in this locality. We shall enumerate them in the order in which they are given by M. Robin.

1. *Trichophyton tonsurans* (Malmsten).—Syn. *Trichomyces tonsurans; Mycoderma of the Plica polonica; fungus of the hairs in Herpes tonsurans; fungus of Porrigo scutulata; Achorion Lebertii; fungus of the Teigne tondante* (Bazin;) *Rhizo-phyte* (Gruby).—This fungus was discovered and described in 1844 by Gruby, in the disease called by the brothers Mahon 'Teigne tondante;' by Cazenave 'Herpes tonsurans;' by Erasmus Wilson 'Trichoses furfuracea,' (one of the diseases called ringworm and porrigo scutulata in this country.) It exists also, as pointed out by Güsberg, in the plica polonica, although the two plants were formerly described as different.

The trichophyton is formed by oval transparent spores, which give rise to articulated filaments. Its anatomical seat is in the *interior of the roots of the hairs.* The hair and fungi simultaneously increase; the former seem larger than usual, are paler in color, lose their elasticity, soften and break off when they have risen some one or two lines above the surface of the scalp; in the short cylinder then left, the fungus grows still more rapidly, so that the normal structure of the small stump of hair soon becomes indistinguishable. Sometimes the hair breaks off before emerging from the skin, and the fungus, epidermis, and sebaceous matter fill the ends of the piliferous conduits, and form the little prominences which can be seen by the naked eye in this disease, and give the skin a rough anserrine appearance. The sporules and mycelium of the plants can sometimes be seen, in the form of a white powder, on the roots of the broken hairs; sometimes the cutis becomes congested and thickened, and then the plant is mixed up with scales of epidermis, with fatty and albuminoid granules, with pus, &c.; and crusts are formed of greater or less thickness, in which the growth of the fungus can go on.

MM. Robin and Bazin adopt unreservedly the opinion that the trichophyton is the cause of the disease known under the various names above given ; and each author relates examples of the contagion of the disease by transmission of the spores. Bazin has made the very important observation that the same disease will attack horses, and can be communicated from them to men. But both Robin and Bazin, however, admit that there is some condition of the hairs (dependent no doubt, on constitutional causes) which is essential for the growth of the plant, as sometimes the disease disappears — i. e. the fungus dies — without treatment.

The *diagnosis* of this disease is extremely easy. The usually round bald patches, with the little elevations caused by the swollen roots, and the dryish scales of epidermis covering the skin more or less, and accumulating around the elevations, are very distinctive marks. Occasionally, when the cutis is more congested, and the crusts are thicker from abundant cuticle and exudation, some doubt may exist, but then the trichophyton can be usually found in the crusts.

The *treatment* of this species of ringworm has been long one of the most difficult points in dermatology. Its principles, however, are now well understood, and few cases resist the proper measures. The essential point is to apply to the roots of the hairs a preparation which may destroy the trichophyton ; if this can be done, the disease is cured. It is first of all necessary to remove the hair ; this is in part generally accomplished before the case comes under treatment, by the course of the disease ; if it has not been sufficiently done, 'epilation' can be accomplished by a chemical agent, or by extraction with pincers. M. Bazin recommends the ointment given below,* or the oil of cade, which appears to be the best depilatory known, or with these means epilation with the pincers may be combined. The removal of the hair permits a "parasiticide" solution to be applied to the hair-follicles, within which are the prolific spores of the fungus. For this purpose M. Bazin recommends either a solution of bi-chloride of mercury (1 part to 250 of water,) or an ointment of the acetate of copper (1 part to 500 of lard.) We have used also, with excellent effect, a solution of the pernitrate of mercury, about one part to 30 or 40 of water ; this is, however, a very powerful remedy, and is to be cautiously used, as it easily blisters the scalp. We have used also an ointment composed of sulphate of copper (1 part,) alum (3 parts,) and lard (20 to 30 parts, according to the age of the patient.) Probably, however, a better parasiticide agent than any of these is the sulphurous acid, which we have seen Dr. Jenner employ lately in a case of favus, with astonishing results, and which doubtless would be equally successful in tinea tondens. Chlorine water might also possibly answer the same purpose.

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*Lime and carbonate of soda, of each one part ; lard 30 parts.

With respect to the name of the most common disease in which the trichophyton tonsurans appears, the term used by Cazenave (herpes tondens) is extremely unfortunate; no doubt vesicles are sometimes seen, and sometimes the cryptogamic disease succeeds to true *herpes circinata* of the scalp, but in many cases there are no vesicles at all throughout the whole course of the disease. The term used in this country, *porrigo scutulata*, is inconvenient, as it is applied with greater justice to favus. The old term of tinea is, after all, by far the best, and the specific affix tondens expresses well one great feature of the disease, the baldness arising from the brittleness of the hairs.

[The second species, which has been little studied, is the *Trichophyton sporuloides.* The 3rd is the *Trichophyton ulcerum.* M. Lebert has described a fungus in the crusts covering an atonic ulcer of the leg. The 4th is the *Microsporon Audouini,* present in the disease termed Porrigo decalvans by Willan. The 5th is the *Microsporon mentagrophyta,* found in a case of mentagra. This disease is easily cured by epilation, and subsequently using a lotion of bichloride of mercury. The 6th, the *Microsporon furfur*, has been discovered in the Pityriasis versicolor of Willan. The 7th, the *Achorion Schönleinii,* is the most important, being the fungus of Favus.]

Schönlein was the first to suggest that the honeycomb, or yellow favous crusts in the so-called porrigo lupinosa (Willan) and porrigo scutulata, were constituted by a vegetable growth. This has been repeatedly confirmed, and many excellent descriptions have been given of the disease, now called indifferently favus, tinea favosa, or porrigo scutulata; but none, we think, better than that which is contained in the work before us.

M. Robin believes he has discovered that the primary seat of the achorion is in the depth of the hair follicle, against the hair, and, as we can understand the description, outside the layer of epithelium which covers the root of the hair, and which forms "the inner root-sheath" of Kölliker. In this observation, however, he has been anticipated by Wedl, who has pointed out that by using a concentrated solution of liquor potassæ, to make the parts transparent, the fungus is found in the follicle around the hair at the place where it passes through the epidermis. In addition to this, the plant is found in depressions on the surface of the skin, forming the yellow honey-comb-like masses which gave the specific name, favus, to the disease; and which, from their frequent buckler-like shape, suggested the term 'scutulata.' The development of the achorion in this situation is described by Robin after Remak and Lebert. A cuticular elevation is seen, beneath which is a small favus; when the cuticle is raised a drop of pus sometimes issues; hence the error of those who have considered this disease always pustular; generally, however, (Robin, Simon, and Hœffe,) there is no pus or liquid of any kind; the plant grows, and the cuticle over it (supposing it has been forcibly detached) finally separates, leaving the favus exposed to the air.

M. Robin does not notice the important statement of Simon, that at first there is at the point where the favus is about to form, only an increased secretion of epidermis; he notices briefly the fact, that sometimes the under surface of the favus is coated by cuticle, which separates it from the compressed and attenuated derma.

The structure of the favus is given at length by both authors, but it is scarcely necessary to do more than notice that Robin, in addition to the mycelium, the spores, and the receptacles of the achorion, describes a finely granular amorphous layer, which forms the external coat of the favus, and is the representative of the amorphous 'stroma' which often accompanies the mycelium of algæ and fungi. In the favus also, as we shall presently see, another and distinct fungus can sometimes be found.

M. Bazin describes the favus under three heads, which are fundamentally identical and different only in respect of form.

1. Favus urceolaria dissemina; this corresponds to the porrigo favosa, Favus dispersus, Teigne alveolaire, of other authors.

2. Favus scutiformis: this is the porrigo scutulata, or favus confertus.

3. Favus squamosa; a form usually called scutulata, but distinguished chiefly by the irregular distribution of the achorion, and by the furrowed masses formed by the fungus, the hairs, epidermis, and exudation.

The treatment of favus recommended by Robin and Bazin is epilation, and the application of the corrosive-sublimate solution, or of acetate of copper ointment (1 part to 500 of lard,) to kill the plant still remaining adherent to the hair follicle. We suspect that the sulphurous acid employed by Dr. Jenner will be found a more effectual application than either of these two. [The remaining species of this division are unimportant.]

B. CRYPTOGAMIA ON THE MUCOUS MEMBRANE.—The plants forming on mucous membranes, or in the contents of cavities lined by mucous membrane, are of less interest than those which grow on the skin, as in most cases they are decidedly only secondary. We shall merely enumerate them :

1. *Cryptococcus cerevisiæ.* Kutzing. (Syn. Torula cerevisiæ—the yeast-plant,) in the bladder, stomach, intestines, &c.
2. *Merismopœdia ventriculi.* Robin. (Syn. Sarcina,) in the stomach, intestines, &c.
3. *Leptothrix buccasis.* Robin. (Syn. Alga of the mouth.)
4. *Oscillaria (?) of the intestines.* Farre.
5. *Leptomitus urephilus.* Montague. (An alga described as forming in the urine. It has as yet been scarcely studied.)
6. *Leptomitus (?) Hannoverii.* Robin. (Alga found by Hannover in the pharynx and œsophagus.)
7. *Leptomitus (?) of the uterus.*
8. *Leptomitus of the uterine mucus.*
9. *Leptomitus of the eye.*
10. *Oidium albicans.* Robin. (Syn. Cryptogamia of diphtheritis and aptha.) Aphtophyte (Gruby.)
11. *Fungus of the lung.* Bennett.
12. *Fungus in the discharge of glanders.*—[*Braithwaite's Retrospect,* from *Brit. and For. Med. Chirurgical Review.*

ART. III.—*On the Excito-Motory System of Marshall Hall.* By DR. DAVEY.

The author of this paper endeavours to show that the excito-motory phenomena, as explained by Dr. Marshall Hall, rests on a basis which even *he*, up to this time, has failed to recognise. His object is to demonstrate that the true spinal functions stand in no need of the distinct set of nervous fibres—the exodic and eisodic nerves—which Dr. Hall describes and Mr. Grainger endeavored to demonstrate with the scalpel; but that the sensory and motor spinal nerves are of themselves sufficient to create all the phenomena with which Dr. Hall has made the profession so fully acquainted.

Dr. Davey contended that the excito-motory system can be roused into action when the spinal marrow has been separated from the brain, or even in the case of an acephalous monster born without a brain ; but even more ; that precisely the same phenomena have occurred in monsters born without either a brain or a *spinal marrow;* and quotes Sir Gilbert Blane to support him in this statement. He declares that the reflex actions properly so called, are nothing more than an amplification of the ordinary spinal functions; an additional exciting cause, either from within or without.

An effort is then made to prove that the *organic system,* with the solar ganglion for its centre, is the great mainspring of all the phenomena of life; whether they relate to the organic or animal functions; whether to the brain, spinal marrow or any other individual part of the whole organism. He declares that the ganglia of the sympathetic system are in existence in the embryo anterior to the cerebro spinal organism, and that the medulla spinalis, as well as the brain; the heart and other internal viscera; all exercise their several functions in virtue of the power derived from the ganglionic system. He denies the correctness of Dr. Hall's experiments and states that the removal or destruction of the sympathetic system in the frog has always been found fatal to the true spinal phenomena. The motions so obviously perceptible are nothing more than retained nervous influence, and continue no longer than the peculiar contractile irritability remains. The following passage is quoted from Dr. Hall's book on the "Nervous System" to strengthen his position: "I must add that as the irritability of the internal organs depends much on the ganglionic system, so that of the muscles of the limbs may partly depend on the latter system. Although I have observed this irritability to be greatly diminished by the removal of the influence of the spinal marrow, I think," he adds, "I never knew it to be completely annihilated under such circumstances."

Again, Dr. Davey says, the function of respiration is under the control of the spinal system, and when that ceases, it is an evidence that the spinal cord has lost its functions. How, then, can we account for the fact that the uterus has been able to expel a child after respiration had entirely ceased, which he declares to have occurred, unless upon the supposition that the ganglionic system still continued to give vitality and muscular power to the organ?

He therefore believes—

"1. That the more complicated anatomy of the spinal cord, suggested by Dr. M. Hall, and sought for by Mr. Grainger, has not yet been realised.

"2. That the mere sensory and motor nerves or roots are themselves sufficient to the integrity of all those phenomena called excito-motory, which emanate from the spinal cord; or, in other words, that there is no necessity for any distinct division of the nervous (spinal) system, for the production of the excito-motory phenomena.

"3. That the exercise of the functions of the spinal cord is due to the peculiar influence of the ganglionic nervous system, exerted on its organism.

"4. That both the external and internal excito-motory phenomena are alike dependent on the vital stimulus imparted by the great sympathetic nerve, and, in the former instance, through the instrumentality or medium of the medulla spinalis.

"5. That such is the relationship between the great nervous centres, viz: the brain, spinal cord, and the solar ganglion, that the second, (viz: the spinal cord,) being at one time under the dominion of the first, *i. e.* the brain, and at another time under that of the third, *i. e.* the solar ganglion, and being thus intermediate, will now manifest a cerebral or voluntary power (and this the result of consciousness, and, of course, volition,) and then (the antecedent circumstances being dissimilar) display one of an involuntary, automatic, or instinctive, or excito-motory character; but this only, of course, when the organic nervous apparatus is in the ascendant, and the brain comparatively quiescent—or, in other words, when sensation (spinal) and motion, and not consciousness and volition (cerebral attributes) are in operation, if I may be allowed so to express myself.

"6. That the great sympathetic nerve is endowed with a specific and independent power, to which both the brain and spinal cord, and with them, of course, their functions are subordinate."

Researches on the Sympathetic Nerve. By M. CLAUDE BERNARD. (Virg. Med. and Surg. Jour. from Gaz. Médicale.) When the great sympathetic nerve is divided in the neck, or its ganglia excised, the results which follow are, retraction of the eye-ball, contraction of the pupil, redness of the conjunctiva, and the projection of the cartillage of the third eye-lid. These phenomena were observed first by Pourfour du Petit (1727,) and afterwards by Dupuy, Brachet and John Reid. In 1846 M. Biffie noticed that by galvanising the cephalic end of the divided nerve, the pupil which was contracted in consequence of the section of the nerve, would become again dilated.

The experiments of MM. Budge and Waller proved that the influence transmitted by the sympathetic was derived from that portion of the spinal cord situate between the last cervical and sixth dorsal vertebra, which they named the cilio-spinal region.

M. Bernard announced to the Academy of Sciences in March, 1852, his important discovery of the great increase of animal heat and of sensibility on that side of the head on which the sympathetic was divided; and also ascertained that upon the application of galvanism to the upper end of the nerve this animal heat would disappear. Budge referred this increase of heat to the cilio-spinal region Waller and Brown Séquard explained the increased heat and vascularity by the paralysis of the arterial system, caused by section of the nerve; Brown Séquard claiming to have been the first to show that galvanism of the sympathetic diminished the temperature and produced contraction of the arteries.

M. Bernard then proceeded to prove by a series of experiments,

1st. That a division of the sensory nerves, in addition to the abolition of sensation also diminished the temperature of the part.

2nd. The division of the motor nerves destroyed the power of motion and also diminished the animal heat of the parts.

3rd. The destruction of the sympathetic producing neither a loss of motion or sensation, greatly increased the temperature.

This augmentation of the animal heat is, therefore, a property peculiar to the sympathetic nerve. The elevation of temperature begins instantaneously with the section of the nerve, and amounts to four or five degrees centigrade. The excess of calorification upon a section of the nerve lasts in rabbits from sixteen to eighteen days, and in dogs about two months; but after extirpation of the ganglia, its effects have remained very intense a year and a half after the removal of the ganglia.

Upon the application of galvanism to the divided nerve, reverse phenomena are produced. The pupil dilates, the vascularization of the parts disappear, and their temperature fails.

"I have only wished," says the author, "in this communication, to establish one point in the complex history of the great sympathetic, namely, that the section of the filaments or ganglions of that nerve possess constantly the privilege of increasing the calorification of the parts to which it is distributed. These phenomena are only the exaggeration of what naturally takes place in the production of animal heat. In giving the means of increasing the production of heat and localizing it in external parts which are easily observed, I had thought of rendering more accessible to our means of research, the study of that important function which is still so little known, but which cannot be investigated elsewhere than in the greater or less activity of the chemical metamorphoses which the blood undergoes in the living textures under special influences of the nervous system."

ART. IV.—*Medical Heads and Medical Life in Paris.—Unpolished Sketches from personal observation.—The Chirurgeon-in-Chief of La Charitè.*

"Crudelis ubique
Luctus, ubique pavor et plurima mortis imago."
Æn. 11, 369.

"Physicians mend or end us
Secundum artem, and though in health we sneer,
When sick we call them to attend us,
Without the least propensity to jeer."
Lord Byron.

Should one enter La Charitè at 7 o'clock of a winter's morning, pass through the first square, and, turning to the left, ascend the staircase, he will see long ranges of wards, much more than a hundred yards in length, with a double row of beds. Each of these compose only one side of a double set of quadrangular buildings, and there are two ranges, one above the other, for males and females respectively. Let him advance down to the extremity of one of these wards, and he is surprised at finding others leading off still as extensive as the first to which the stairs conducted him. Follow the last mentioned, and they branch again till they end in small blind rooms, containing each eight or ten beds, all with coverings and curtains of white linen. At different intervals, more or less distant, are visiting professors, in long white aprons, with or without velvet caps, and scarcely distinguishable from the half dozen Internes who accompany them; and around, in numbers varying with the popularity of the chief, stand crowds of medical graduates and students.

The latter, though preserving to a certain extent the type of the genus, is more varient and less unique in Paris, than perhaps in any city in the world.

There are two or three, or a dozen, Frenchmen, generally small, bearded, and often badly dressed, and with note books containing fly leaves of white paper — the most industrious of all in taking down everything that falls, for they have examinations to pass. The French medical student is often poor, but may rise to reputation, fame and wealth. The Italians are scarcely distinguishable from these, except that their beards and hair are blacker, and less of their faces is seen; they are also generally neater than a native. The Germans are more dignified, grave and sedate, for they are usually graduates, and men of age, and are seeking for something to compare with what they have seen in Berlin or Vienna; these are, consequently, extremely critical, and as they understand and speak French almost as universally and as well as a Russian, it is only their light hair and Teutonic physiognomy, which disclose their origin. There are not many English, and as the few remain but a short time, often merely to get a certificate of attendance upon Velpeau or Louis, to assist them at the College of Physicians and Surgeons, or at Apothecaries' Hall, we need not refer to them more fully. An Englishman never wears a moustache and he is easily known.

Next to the Frenchmen in number, rank the Americans; they are generally tall, but with every hue, feature and appearance of every other race on the globe. Some are unmistakable, but others you could not distinguish from any body else. They adapt themselves, or offer without adaptation, any type that exists. They have an ambition to speak French — some cannot resist chewing the customary weed; many are very hard and regular students, others amateurs who stroll in a morning or so, look at a great gun, find hospitals, before breakfast, not the things they are reported to be, and that is the last you see of them *here.* But many of our countrymen actually do not give themselves time to take their meals in Paris, so constantly and assiduously do they attend hospitals, lectures, cliniques, dissections, private courses, etc. An American, when he *is* a student, and that not seldom, goes ahead at it, and none surpass him. But he does not observe, reflect and draw conclusions as much as he crams. He does not lose a moment of the short time he has allowed himself for medical Paris, because he means to know the *Quartier Latin,* attend the Café Chantons, Mabilles, the theatres on the other side of the river, and see Europe besides. The American is, therefore, generally under high pressure. I can affirm that many of them do not give themselves time for digestion ; consequently, with all the advantages of French cookery, they remain as they came, dyspeptic! On their way from one hospital or lecture to another, they fly into a restaurant, swallow down a breakfast at 10, or a lunch at 1, and away they go. If you follow him until 10 that night, he is still in motion. He has in the meantime, taken a crowd of notes, which he puts up to read over and digest some day when he reaches home.

Now, instead of turning to the left as I proposed, should you open a glass door to the right, here are still other ranges of wards, with branches leading off almost interminably. Those on the first floor are for males. Ask a patient what is the matter with him and you will find that it is a surgical case. Far from where you enter stand a throng of men, some crowding around a particular bed, some with hats on, others uncovered; from out their number moves an individual whom you did not, at first observe, but whom every one seems to follow, as he passes rapidly from one bed to another, squeezing his way in among those encircling him. He is a person with a sharp, greyish eye, of middle height, more tall than short, inclined to be thin, and moving unobservingly by, unless when he stops, occasionally as the inclination seizes him, to ask some question of a favorite chief-de-clinique, or of a sister. He will sometimes not speak or smile for a half hour, unless on the subject of medicine, or the case before him ; at other times, he even smiles and makes a little dry fun with the sick man, though he never laughs, and often, if induced to relax at something particularly ludicrous, he soon recovers himself, becomes grave, or rather I should say earnest, and his eye looks as piercing as before. Neither his voice nor manner is soft or winning, although they show, when he speaks to a boy, or the gravity of the case is imminent, that his heart is feeling, and that even habit, time and the knife, have not made him entirely callous to the sufferings of the unfortunate. I have heard him quiz a little *Interne* with white hair, upon the color of his moustache ; but it was not done in a genial way ; it was as a surgeon would quiz, and you only laughed because the great man laughed. He also wears a white apron with pockets, from which dangle a pin-cushion, and on his head is a purple velvet skull cap, with tassel. Thin grey hair escapes from beneath, and you are quite surprised when, upon inquiry, you are told that that is the great surgical Amphictyon of La Charitè and of France, M. VELPEAU.

Here is a true veteran for you ; here is a surgeon with the three requisites—a lady's hand, an eagle's eye and a lion's heart; here is the man who enjoys the "*digitis monstror prœterientium ;*" you see at last, him that you have been hearing of all your life, and before you ever thought of medicine ; you have, perhaps, heard your cousin or friend, who was in Paris years before you, speak of seeing Velpeau cut off an arm, or a hand, on such and such a morning, and you yourself also watch him do the same thing, on the same spot, fifty times ; in fact, you see him perform two or three operations almost every morning you take the trouble to be at his amphitheatre at La Charitè. He will cut for stone, operate two or three times for cross-eye, take out tumors from the breasts of two or three women, amputate a finger, a thumb or a leg, almost any morning you choose to name, after he has visited these long lines of beds up stairs and down stairs, in male and female wards, and after he has lectured an hour, and all before breakfast. Heaven knows at what hour he has risen !—what he has not written in one of the works he is publishing, on the "*Maladies du Sein et de la Region Mammaire,*" or some other. But I do know that he has not yet finished, because, before his carriage and pair leave the Rue Jacob, in front of La Charitè, and when you have gone to the Cafè de Paris, to Madame Dijon's to 66 Rue de Seine, or with me to my rooms on the garden of the Luxembourg, *he* has remained to prescribe for a score of what are called out-door patients, whom he examines as fast as they can be marshalled in a room on the ground floor. Then M. Velpeau's private consultations at his own residence, and his visits have not yet commenced. But notwithstanding, you will sometimes meet him on the *Pont Neuff*, or the *Pont de Carrousèl,* with a young lady on his arm, as like as father and daughter can be, as they walk to the Louvre or the garden of the Tuilleries. And you ask again, is this the man, strolling quietly by, the hero of a hundred bloody operations, the creator of bold systems, and originator of new modes of practice — the bold generalizer, who has laid a master hand on almost every department of medicine ; who has written a hundred volumes, whom everybody quotes, even men who study specialities, and who recognize that, during a life of ceaseless toil and exertion, *he* has made a speciality of every department of his profession, and has rendered himself as competent to pronounce upon their respective merits as any enthusiast of a single one, whether it be in surgery, materia medica, obstetrics, physiology, diseases of the eye, or anything you please to name. M. Velpeau is a bold. successful innovator in each and every one, and he has stamped his name in every text book that the student uses. He has written, and now writes, tomes filled with costly illustrations, which the medical world reads and consults, and swear at, sometimes, but always quote or follow. There are none so dauntless as not to do him reverence, none so bold but do not ask what Velpeau said this morning at a clinique. Does he discover anything, he goes to have Velpeau test, and make it go down. With Velpeau's sanction, he is confident against the world in arms, and goes forth with redoubled zeal. Does Velpeau damn the new project, it is like a dash of cold water, and the thermometer of his ardor falls instantly. I think, that generally, M. Velpeau, after his very large and most enlightened experience and observation, has a right to pronounce, and that he does so cautiously and with discrimination. He has, at times, been quick, and perhaps wrong, and now I think the microscopists will make him rue the day that he decided too dogmatically against their true and false cancers; for, already MM. Lebert and Robin will show him that the glass is surer and more unerring than the unaided experience of even *his* eye and finger, and he will confess, or what is worse, posterity will do it for him, that true cancer and the unmalignant fibro-plastic growths reveal themselves by signs, more certain than those gained by observation and sight simply. Perhaps, too, M. Ricord, or his successors, will demonstrate, that in proclaiming his doctrine of syphilization, a true advance has been made, which time will sanction and enforce, and that its cardinal points are *real*, which M. Velpeau utterly repudiates and rejects *ab ovo*, root and branch. Velpeau must recollect that Ricord, though young and vigorous, resembles him in one respect—*he* does not take vacation either.* An old man, however great, is apt to remember triumphs won in youth from giants, and he grows too confident thereby. He is apt to forget that the tables turn, as age advances and years roll by, and when the conflict lies between the old and the youthful, but at the same time, the vigorous, the cautious and the observant.

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*M. Ricord informed me that, with the exception of the last, he had not indulged in the ordinary *vacance* of the Paris doctor, for twenty years. He is at the *Hospital du Midi* the year round.

As a lecturer, Velpeau is not remarkable, though he is sufficiently fluent and pleasant. Some new comers find his French easy to understand; but though he does not mumble his words, and splutter as M. Roux did, yet there are several in Paris who speak very much plainer and better than he. I could cite Trousseau and Maisonneuve for examples. His tone is somewhat monotonous, and however enlivened by an occasional dry jest, yet there is neither much eloquence nor any brilliancy. But Velpeau's attraction is his fame, his knowledge, and the perfect flood of light which his vast experience enables him to throw on every subject. You feel that he utters opinions which you can set down as rules and axioms for your guidance in practice. He speaks *ex cathedra* upon every topic; his words are golden, for they flow refined from a vast mass of material collected during years of earnest toil, a toil directed by an enlightened understanding, and guided by an acquaintance and comparison, with not simply the stores of the past, but with the improvement of modern research.

Old and antiquated notions, and an adherence to early impressions, however false, cling to some who are only distinguished by age, arrogance and imbecility. But Velpeau, clothed in the heavy ancient armor of the veteran, still bears about him the keen and trenchant sword, as sharp and polished as that of any youthful champion around him. He may hedge himself in with precedent and experience, but he is constantly re-examining his precedent, and weighing and comparing his experience with that of others, whilst none contribute more fresh additions to them than himself. As his English compeer across the channel, old Liston, said: "Age is not the test of experience, but the possession of the greatest number of well assorted facts on any particular subject, whether they be got in five years or fifty, constitutes experience."

Though Velpeau has a finger quite awry and mishappen, from some wound gained during the pursuit of his profession, I believe, yet this does not at all interfere with his manual dexterity. Not priding himself on it, he is yet ambidextrous. I shall be excused for saying that however skillful in this respect, he cannot surpass our countryman, Mott, who uses either hand, sinister or dexter, with the most perfect indifference to himself. I have seen Mott dissect out a tumor over the wrist of a patient, at a surgical clinique in New York, when he employed his left hand alone. The individual did not lose an ounce of blood, and there were the vessels flowing just beneath, which had been evaded with a nicety surprising to the beholder. We know that, with a few rare exceptions, including some operations on the eye, the surgeon had always better avoid display, and manipulate with the usual and most natural member.

Verily, there is a charm and an attraction about surgery, which deceives and captivates the young, the inexperienced and the unwary. It operates directly upon the senses. There is a brilliancy and a decision about the movements of the glittering knife, which is entirely irresistible. It does its work so directly, suddenly, and without appeal. The sight of the sudden gush of life blood welling up from the heart itself, has something about it which stimulates and excites; so that most men start to be surgeons as they do to be metaphysicians, but when they are past thirty they find they have been guilty of an expensive blunder, for the proportion of their medical to their surgical cases are as 10 to 1, and time and years are wasted in the attempt to make a Velpeau or a Malgaigne, when they might have been a much more respectable and distinguished as a Trousseau, Bouillaud or a Louis.

It neither requires talent nor genius to wield the knife, for the heavy and the phlegmatic, the stolid and the dull, operate when they cannot prescribe, and excise and amputate when they cannot cure. Traumatic injuries and morbid growths are rare in number, and slow in formation, whilst medical cases are frequent, and come thick and fast, at the same time that they demand more time and care for their relief. To be a great *surgeon,* however, in the enlarged application of the term, requires all the qualities of the mere operator, as well as those of the judicious medical man, but there must also be the material to give ex erience which only falls to the lot of a very few, even in the largest and most populous cities.

Among his peers, if peer he has, Velpeau is *facile princeps.* See him standing amid his gowned associates, as for example, when Orfila died, and his body was brought by them into the church of the San Sulpice, or when he walks into the Academy of Medicine, or sits around the table at the Ecole de Medicine, when they are examining by *concour* that fine band of talented young Frenchmen contending for places. Hear how many of them will quote him, Malgaigne, Nelaton and Roux, and see how queer and characteristic he looks all the while. I always smile when I watch Velpeau!

His hand was sick last year, and it was curious to observe how the Internes flocked around it of a morning — how the sisters, in white caps, brought flax-seed, and the nurses flew for laudanum, and everybody offered their services, whilst old Velpeau disdained them all, and quietly dressed it himself. He never had it done at home, as everybody else would, by some member of his household, but, like a surgeon, he kept it to be taken care of by men in the midst of that theatre, where it had daily, for so many years, been performing such feats. I often looked on and smiled at the fun. I think, on one occasion, he did let one of them tie it up when he got through, and I presume it will be traditional, or like an heir loom in the man's family.

Singular to relate, this ambitious acquirer of professional lore does not speak English. Like most of his countrymen, he is content with the French, which they think every body either does or should understand, and if they do not, that it is simply their loss. One morning, winter before the last, he stopped two or three of us on the stairs, to assist in translating what a raw Irishman said, who was attempting to obtain a certificate of six weeks attendance upon the surgical clinique.

Velpeau has received a notice in the "*Biographie Universelle des Contemporains,*" published as far back as 1834, from which we gather and translate a few particulars, (see fifth and supplementary volume:)

"Alfred Armand Louis Mariè Velpeau, Chevalier of the Legion of Honour, etc., is one of the most striking examples of what can be effected by energy of character, particularly when united to a happy natural facility." He was born in 1795, at Brèche, a small hamlet, eight leagues from Tours. His parents were poor but honest. After some medical studies in his native place, and in the hospital at Tours, he came to Paris soon after 1818, with 400 francs, minus his travelling expenses. He lodged at 7 francs per month, and expended ten sous (half-franc) daily for his meals. He was soon crowned at the *Ecole Pratique,* and nominated aid in anatomy. He gave private courses in anatomy, surgery and obstetrics. Before 1830, he had triumphed six times at the concour, out of ten essays, and he was nominated surgeon to the Hospital La Pitiè. It would be needless for us to mention in detail, his subsequent successes, nor the list of works he has written, though they are at our command. We may refer the reader to the paper cited above, and to a work by F. Campbell Stewart, of New York, on the "Hospitals of Paris," which we examined some years since.— *Charlestown Medical Journal.*

Art. V.—*Lectures on Fever.* By William Stokes, M. D., *Regius Professor of Physic in the University of Dublin.*

I stated in the Introductory lecture, that since the period when I lectured on fever, as one of the subjects embraced in a systematic course, my views on that disease had been altered. In order to prevent misconception, it is necessary that we should return to this point.

By referring to the American edition of my lectures on the Practice of Medicine, published in 1837, it will be seen that I had insisted on the doctrine of essentiality, and that I combated those views of the continental pathologist which referred fever to a local and an inflammatory cause. On these great points, no change has taken place in my opinion. I do not claim any credit for the doctrines I then taught and still believe, for they were then held by most British physicians; and I am glad to observe, that the state of opinion on the Continent on these questions is fast approaching to that which has been so long held in these countries. The frequency and importance of the local lesions were maintained by me in 1835, and to this doctrine in general we still adhere.

In what respect, then, you will ask, have my opinions altered? I answer, that it is in the view we should take of the relation which inflammatory action has to the local diseases in fever; and, again, as to the amount of influence which these local affections may be supposed to possess, in inducing a fatal termination of the malady. Although we formerly held that the local alterations were secondary to the fever—that they were really symptomatic of the fever, not the fever symptomatic of them, as Broussais taught—yet we did not sufficiently recognise the fact, that in most cases the inflammatory action associated with them was itself secondary to the local lesion —that it was re-active, and, as such, had probably less pathological value than the local change which preceded it.

Again, the opinions which were then inculcated as to the influence which the local diseases had in causing a fatal result must be in at least two respects modified. I formerly was of opinion that death in fever was mainly to be attributed to the virulence or number of the local diseases. Such is not my opinion now; for although in examining the bodies of many patients who have died by fever, we find various local alterations, yet they are often insufficient to account for death. And we have had abundant proofs that the typhus state itself may cause death, without there being any manifest local disease in any part of the system.

In another, and seemingly opposite point of view, our opinions have changed. For I think, that so far at least as the lungs are concerned, we did not sufficiently estimate the danger produced by the local disease independent even of the re-active inflammation. To this point I shall hereafter draw your attention more fully. We too exclusively considered the local affections as inflammations, though secondary to the fever; and did not sufficiently admit them as special typhus lesions or deposits, which might occur without any inflammatory action, or precede it.

To sum up, then ; whatever be the changes that may have occurred in my opinions about fever, they are rather developments of the doctrine formerly taught, than its rejection, or the substitution of any essentially opposite view. In all points relating to the essentiality of fever, the influence with the law of periodicity exerts upon its phenomena, the secondary nature of its local affections, and, lastly, its contagious character, my views remain unchanged. But on those points to which I have already alluded, the alteration of our views is important as bearing on practice, inasmuch as it points more decidedly to the adoption of a treatment directed to the general more than the particular or local condition, and again to the more liberal employment of the tonic and stimulating treatment in the typhus of this country.

You will easily anticipate the general result of the views which I now attempt to teach you. They have led us to attach less importance than we did formerly to the inflammatory state in fever; that is, to the condition that indicates an antiphlogistic treatment in the ordinary sense of the word. In the use of stimulants we have become much more bold, even under a great variety of circumstances. But I must say, that with reference to the employment of wine in large quantities, we have been drawn to this mode of treatment less from any theory than from simple and accumulating experience by which we became less and less timid in the use of stimulants. Observe here, how a truth in pathological anatomy may be foreshadowed or anticipated by observing the effect of a therapeutic agent.

We considered at our last lecture the general nature of fever, and you will recollect that I impressed upon you, as the foundation of the entire subject, that, when we compare fever with a large number of the diseases catalogued in books, we find this great difference—that, while the great majority of these latter diseases have an anatomical character, fever is wanting in an anatomical character. We may, then, you will readily see, divide all diseases into three great classes.

In the first class we have diseases which have an anatomical character—diseases to which we can give an anatomical expression. I need not occupy your time in giving examples of this class of diseases.

In the next place, we have a most important class of diseases, which have no anatomical character, and yet they are not fevers. I allude to the *neuroses*, or, as they are commonly termed, nervous diseases; of these, mania, epilepsy, lock-jaw, hydrophobia, hysteria, chorea, convulsions, are familiar instances. Here we have some most remarkable diseases, which have not any anatomical character; that is to say, we cannot show that they depend upon any known or ascertained anatomical change of any portion of the system, including the brain, spinal marrow, and nerves. The general character of this singular group of affections, which we call *neuroses*, shows that, whatever be the nature of the disease, the seat of it is in the nervous system; but, in the present state of anatomical knowledge, we are not justified in saying what the condition of the nervous system is to which they owe their origin, or whether it is an organic change at all. Even the results hitherto obtained by the microscope have been chiefly negative; the microscope has added but little to what was before known on those subjects. I may state here, lest you should fall into a misapprehension, that I do not wish you to believe that in none of those diseases do you find organic change. The fact is, that in many of them you do; but, when you come to inquire what those organic changes are, you find that they are so inconstant, so variable, frequently so similar in opposite diseases, that they altogether fail in throwing any positive light upon the subject.

This, then, is the second class of diseases; the first class having an anatomical character, the second having no anatomical character. Now, we come to the third class, which comprises fevers. Fevers as we have already said, have no anatomical character,—then you will say, "How do they differ from the neuroses?" As far as we know, and strictly speaking, they differ very little; but, there is this feature connected with them, that fever seems to be a special condition of life which is to exist for a certain time, and then to cease,—that is to say, it is under the law of periodicity; and, in this respect, the phenomena of fevers differ very much from those of the pure neuroses. There are other differences, too, between fevers and neuroses. It is quite true, that in a large number of fevers, death may take place without any organic change that we can demonstrate anatomically; but it is true, on the other hand, that in a large number of cases, there is a tendency to the development of what I designated at our last lecture as the secondary lesions of the disease. Thus, if we compare these two classes, the neuroses, which are not fevers, and the fevers, properly so called, we find this great difference, that among the former, as for example in hydrophobia, we do not see any tendency to the development of ulcers of the intestine; nor in epilepsy do we find any tendency to the development of bronchial diseases; nor in mania do we see a cutaneous eruption; nor in convulsions do we find any of these various organic changes produced. This tendency, then, to generate or produce local anatomical changes secondary to the fever, is another remarkable distinction between this class of affections and the pure neuroses. There is a third very remarkable distinction between them. Fevers—using the term in a general sense, embracing, as I told you at our last lecture, a great number of diseases, as the exanthemata, typhus, plague and yellow fever,—are capable of being transmitted by contact or by vicinity, and a great many of them are contagious. So that in their subjection to the law of periodicity, in their liability to generate or produce various organic changes in different parts of the system, and in their transmissibility by contagion, we have three very important distinctive characters, although we cannot reduce them to an anatomical expression.

A great deal has been written on the subject of the proximate cause of fever, and theory upon theory has been promulgated on this subject. We are, however, at this moment, just as ignorant of the proximate cause of fever, as we were in the time of Cullen, or even long before him. We do not know what the proximate cause of fever is: but if we look at the entire phenomena of fevers, and inquire what views we may safely hold at present, for want of a better doctrine,—for it may be, that, in the progress of pathological science, the proximate cause of fever will be discovered; and it is quite possible, I might even say, probable,—when, I say, we deal with the expression of the usual state of our knowledge, we are justified in stating that fevers are the result of the introduction of a poison of some kind into the economy. The whole of the phenomena of poisoning by organic matters seem to point out a close analogy between fevers and those diseases in which a poison is introduced into the system. If a man who is in perfect health is exposed to the contagion of syphilis, in a short time his system becomes a laboratory for the formation of syphilitic poison and he is capable of communicating the disease. As far as we can form a judgment in this question, we may say, that there is a very close analogy indeed between fevers and these diseases, whether they be fevers which are the result of contagion or not; and in this way we see a connecting link between fevers, which we call acute diseases, and diseases which are neither acute nor febrile. Thus, for example, we do not say that a patient who is laboring under syphilis, which he has caught by contagion, is in fever; but he is, nevertheless, under a condition, which, as far as the chemico-vital state of his body is concerned, is somewhat analogous to fever, that is to say, his system has received a poison, and having received that poison, it seems to work upon it, or the poison to work on the system, and the result is, that the system becomes a generator of the same poison that it had received. Now, let us go a little farther into this subject. I might give you various other illustrations; and, indeed, I think you will find, that some unexpected analogies will arise in this matter, and that you will even perceive an analogy between two such opposite diseases,—such dissimilar diseases as typhus fever and pulmonary consumption. For there can hardly be a doubt, that, under certain circumstances, tubercular matter introduced into the system acts like contagious matter, and that it produces a development of tubercular disease in the system thus infected. Such cases, then, may be considered as examples, if you will, of very chronic fevers, long-continued fevers, and fevers which are not, apparently at least, under the influence of the law of periodicity. I am perfectly persuaded that the more we study that class of diseases, which seems to be general rather than local, we will find that the possibility of contagion will be more and more exhibited. I am strongly of opinion, that almost all the febrile diseases are contagious—that is, the essentially febrile diseases—and I think it certain that there are other diseases, also, which we do not call fevers, that are contagious. It is hardly possible to doubt the contagiousness of cholera; and we may go still further, and extend the possibility of contagiousness even to such diseases as tubercular affections, and perhaps even further.

Now, let us examine what are termed the Exanthemata, Measles, Scarlatina, and Small-pox. These diseases are, in all essential conditions, fevers. An individual in perfect health is exposed to a certain exciting cause, and he gets a general illness, which exhibits phenomena referable to the law of periodicity. How do these diseases differ from typhus fever? They seem to differ in this, that their local phenomena are more constant, and that they are probably more uniformly contagious. The contagion of small-pox, of scarlatina, and of measles, is a recognised and established doctrine. We know that scarlatina is generally constant in its phenomena,—that measles is constant in its phenomena,—that small-pox is constant in its phenomena, and especially in the phenomena of its secondary change,—so much so, that the secondary change is taken as a distinctive mark of the disease. These affections are probably, as I said before, more directly contagious; and this, perhaps, may arise from the circumstance, that the matter of contagion, in these cases, is more elaborated,—is perhaps more perfect; and the patient who contracts the disease is very much in the same position as a person who contracts syphilis; that is to say, that an organic poison of a special kind, whose essential characters, however, are so subtle as to escape chemical investigation, has been presented to his system, and has affected him. The phenomena of continued fever are more variable; and this may arise from the want of constancy in the exciting cause. We hardly suppose a man to get small-pox unless he has been infected by another who has had small-pox. But continued fever, or typhus fever, seems capable of being produced by a great number of causes, or—if I may so speak—by a number of imperfectly-developed or imperfectly-acting causes, and these, of course, may be infinitely various. We also see this very curious difference between typhus fever and the exanthemata,—that while, among the exanthemata, the one exciting cause always produces its own peculiar disease, the exciting cause of small-pox producing small-pox, the exciting cause of scarlatina producing scarlatina, the exciting cause of measles producing measles,—this does not seem to be the case with respect to fever. For here is one of the most important facts connected with the entire subject, that the same exciting cause—at least as far as we can see of it—is capable of producing different kinds of fever in different persons. This great fact has not been sufficiently dwelt on by the various writers on fever, on the Continent and in England, especially by that class of men whose object seems to have been to make themselves classifiers of diseases,—makers of classifications,—at which nature laughs.

Here is another of the great facts which show the impropriety of attempting to draw lines of distinction between what are termed the *typhus* fevers and the *typhoid* fevers—that the one exciting cause will in various persons produce the two diseases. Now, we see nothing of this sort in the exanthemata. What may be the reason of this it is difficult to say; and we explain it very often by expressing the fact in different words. It is supposed that it may be due to some variation in the state of *receptivity* of the body at the time. For, in the production of the effect of the poison, there are two elements; first, the nature and composition of the poison which is to act; and, next, the chemico-vital state of the body which is to be acted on. The two causes combined produce the result—fever. But if, the cause being the same, the bodies be in different states, we may expect different kinds of fevers; and this is all that we can say on the subject.

Now, gentlemen, we come to another very important matter connected with fever, and rendering this affection remarkable, as compared with the pure *neuroses*, and also as compared with the anatomical diseases; and this is the subject of contagion, on which so much has been said and written.

In a course of lectures such as the present, the teacher should never omit any opportunity that may offer, to impress on the minds of his pupils some general rules for their conduct through life in the practice of their profession.

And here I would take the opportunity of saying, that I would advise you all, never to range yourselves among the advocates of an exclusive doctrine. Do not, therefore, as far as fever is concerned, range yourselves either among the contagionists, or among the epidemists, or among the non-contagionists. The very moment a man ranges himself in the ranks of other men who are fighting for a particular doctrine, he places himself in a false position. His mind is occupied with the excitement of controversy rather than with the search for truth. He becomes an advocate, he ceases to be an inquirer; and the very moment that this change occurs in the mind of the medical observer, he loses, or ought to lose, caste in the ranks of science.

In looking at the subject of contagion, it is very true that the contagionists will present you with an enormous array of facts, and the non-contagionists will present you with another vast array of facts. The contagionists will show you a great number of cases where fever has been directly communicated. The non-contagionists will show you a number of cases where this circumstance did not occur. Now, in one sense, you may say, that the doctrines of both are true; in another sense they are both false. There can be no doubt that disease has originated, and may originate, without contagion. This must be obvious to every man. The primary development of disease must have been without contagion. This is quite obvious.

Again, we see a vast number of cases in which disease is endemic. I need scarcely allude to the common case of ague. There are certain districts in which ague is constantly produced, and where, if a man who has not had ague comes, and is not in contact with any human being whatever, he will, almost certainly, get ague. Here, then, clearly, there has been disease independently produced, or at least without *human* contagion. There are certain districts in South America, certain districts in the West Indies, vast districts on the coast of Africa, vast forest districts in Hindostan, where, if a man sleeps for a single night, although we will suppose him to be alone, without any companions but the wild beasts of the forest, that man will get some form of fever. It is a fact that cannot be denied. Then we see the epidemic of influenza; we see also—if you look at the history of Medicine—unquestionably even within the latter periods of the world's history, the appearance of new diseases, totally new diseases. So that we cannot at all deny that disease may be generated, and that it may spread without the intervention of human contagion. We must believe, I say, in the spontaneous origin of diseases under some exciting cause; but that exciting cause need not be human contagion. On the other hand innumerable facts show, that fever existing in the system is capable of being propagated from one man to another; that it is, in fact, a contagious disease in the strictest sense; and this transmission of the disease may be not merely by contact, but by vicinity. Now, the facts which we must rely on to impress this doctrine of contagion on your mind, when you come to examine them, will appear less direct than you might suppose. A great number of men who have written on this subject, really were but ill-instructed in the rules of logic, and they have not been trained to think properly and exactly on the subjects they were considering. For instance, it was a great object with a number of the French school, especially those men who were the disciples of Brousais, and advocates of the physiological doctrine, to establish the non-contagion of disease. For the doctrine of contagion implies, you will see, essentiality; and the physiological doctrine was opposed to all essentiality. According to the physiological doctrine, there was no such thing as essential disease. Every disease was local and inflammatory. Therefore, in their anxiety to overturn essentialism, they found this outwork, as it were, of contagion, which should be carried. And nothing can be more singular, or, I may say, heroical, than the efforts which a number of the French physicians made to establish the non-contagion even of the most contagious diseases. Many of them went out to the Levant and exposed themselves purposely to the contagion of plague; put on the clothes of persons who were laboring under the plague; slept in the beds with plague patients; inoculated themselves with the matter from the buboes of persons laboring under plague, in some instances actually inoculated themselves with the blood of plague patients. Well, in many cases, these experimenters did not take this plague; and this fact is still relied upon by many of the French school as a proof of the non-contagion of plague and of fever generally. But you will at once see how very inconsequential these experiments are. Here are four or five cases of failure of contagion, and as well might you argue that corn does not grow from seed because the grain sown in the earth will sometimes fail to produce the plant. I may state here, however, that some of these investigators paid the terrible penalty of death in their zeal for science, for they did take the plague, and were lost.

Among the direct facts which satisfy our minds as to the contagious nature of fever, is the operation of contagion in large masses. I need hardly here allude to the singularly forcible argument in favor of contagion which may be drawn from the frightful mortality of our Irish Medical brethren in the years 1847 and 1848. This subject I have already alluded to in the theatre of the Meath Hospital, and it is one which we can hardly look back upon without shuddering. The simple fact alone of the mortality of that class of individuals who are most exposed to the disease, furnishes an argument in favor of contagion which we would but weaken by any observations upon it. There is another curious mode of dealing with the indirect evidence for contagion, to which I shall now draw your attention. You all know that Professor Louis, of Paris, has founded what he terms the numerical system of medical investigation; that is to say, he has attempted to reduce the facts of medicine to numerical expression; so that we would be able, as he supposes, to make medicine an almost exact science. Perhaps at some future period I will draw your attention more fully to the advantages and the disadvantages, to the possibilities and the impossibilities of the numerical system of Louis. My opinion, I may state, generally speaking, on the subject is, that, for the establishment of all that part of medicine which consists in establishing the data of physical diagnosis, the frequency or infrequency of certain pathological changes and matters of that kind, the numerical system is infinitely valuable; but that we cannot, or have not yet been able to apply it to furnish rules of treatment. For the object of the numerical physician and the object of the practical physician—if I may make use of such a distinction—are different. The object of the numerical physician is to ascertain a rule of treatment which will cure the greatest number of cases out of a given number; but that should not be your object, or that of practical physicians. It is very well to know that such results have been obtained; but it does not follow that you are to act on them. Your object is, not blindly to adopt the formula founded on numerical data when it is shown that by its use you can cure the greatest number out of a given number; your object is to cure the diseases of A, B, or C, as they may come before you. And you are not to neglect what you believe to be right in the case of A, B, or C, because you have this array of figures declaring to you that such and such a course, different from that you may be about to pursue, is the rule for saving the greatest number of lives out of a given number. But we may safely use numbers in a different way—as, for example, investigating the data of a particular doctrine.

My father, when Professor of the Practice of Medicine in the Royal College of Surgeons, directed his attention very much to the subject of contagion. He was a strong advocate of the doctrine of contagion. Perhaps he went too far in his belief in the exclusiveness of the doctrine of contagion. Perhaps, also, he went too far in denying the doctrine of the epidemists, or the non-contagionists. However, that has nothing to do with the present question. He thought, that, in looking at the general circumstances which attended the spread of an epidemic in this country, the probabilities for or against the doctrine of contagion might be submitted to calculation. One of his most intimate friends was the late celebrated Dr. Brinkley, Bishop of Cloyne, who was at one time the Astronomer-Royal of Ireland. He was admittedly one of the very first mathematicians of his day, and was especially skilled in that difficult part of mathematical investigation, the doctrine of chances. Now, in the progress of an epidemic in Ireland, (and doubtless, also, in other countries,) in a family of twelve persons, the disease has been known to attack eleven out of the twelve. In some cases, the passing of the fever through so large a proportion as eleven individuals out of twelve, has taken a very considerable period of time, as you may readily understand. It has taken about three months to go through them all. Now, my father proposed these two problems to the Bishop of Cloyne, for solution:

1st. "An epidemic prevails so severely, that one person out of seven sinks. A family of twelve is selected in a particular district, before the epidemic has visited it. What is the chance that eleven out of that family shall take the disease, supposing the sickness of one of the family does not promote the sickening of another,--that is, supposing the disease not to be contagious, and supposing the family to be not unusually liable to the disease?"

The answer furnished by Dr. Brinkley is, that the probability against such an event is 189,600,000 to 1. That is a very singular and extraordinary result.

2nd. "The same general conditions being assumed and also that the number of inhabitants of a district is 7,000, what is the chance that, in a family of twelve within the district, eleven will sicken.

Answer: "The chance then is 300,000 to 1 that no family of twelve persons, in a population of 7,000, will have eleven persons sick."

These numbers furnish proofs so convincing of the truth of the doctrine of contagion, that it is hardly necessary to go further. The facts on which they are based are ascertained facts; they have been common facts in epidemic fever; but, recollecting that they were common facts, the chances against their happening, if the disease were not contagious, would be 189,600,000 to 1 in the one case, and 300,000 to 1 in the other.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

A Clinical Introduction to the Practice of Auscultation, and other modes of Physical Diagnosis in Diseases of the Heart and Lungs. By H. M. Hughes, M. D., Fellow of the Royal College of Physicians; Assistant Physician to Guy's Hospital, etc. Second American from the second and revised English edition. Philadelphia: Blanchard and Lea, 1854. For sale by Riley & Co.

The introduction by Laennec of auscultation and percussion as a means adapted to the investigation and diagnosis of Thoracic and Abdominal diseases, has rapidly gained favor with the medical profession. The almost absolute certainty with which lesions of structure and function of these hidden cavities may be detected and elucidated by these methods, render it important that every physician should possess as accurate a knowledge as possible of their mode of application. The little manual before us of 304 pages, written in a plain, familiar and conversational style, is designed by the author to aid the student in investigating diseases of the Lungs and Heart. Although accurateness and precision in the diagnosis of these affections cannot be acquired from books alone, a knowledge of the principles taught in this little work will aid in their acquisition at the bedside. The sounds indicating the various pathological conditions which these organs assume, are described in a clear, lucid and intelligible manner, which constitute the work a valuable guide to the student of physical diagnosis. It merits a favorable reception

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A Universal Formulary: Containing the Methods of Preparing and Administering Officinal and other Medicines. The whole adapted to Physicians and Pharmaceutists. By R. Englesfeld Griffith, M. D. A new edition. Carefully revised and much extended. By Robert P. Thomas, M. D. With illustrations. *Selectæ sunt quae medicum nobilitant.—Linnaeus.* Philadelphia: Blanchard & Lea, 1854. For sale by Riley & Co.

A book embracing an extensive and varied collection of formulæ for the preparation and administration of the different articles of materia medica, arranged with strict reference to chemical and therapeutic principles, cannot but constitute a useful addition to a medical library. Such is presented in the one before us of 651 pages. In this work the author has adopted the English appellations of the articles used, and the quantity of each is expressed in words instead of the usual pharmaceutical symbols, obviating all liability to mistake. Added to the compendium of formulæ are numerous tables, which enhance the value of the work. A list of incompatibles. A posological table, or collection of the most important medicines with their respective doses affixed. Also, directions for preparing injections for the preservation of the human subject, making it useful to the practical anatomist, &c., &c. The formulary is arranged alphabetically, and contains copious indices — making it a very convenient book of reference.

In short, it is a full and complete work of the kind, and should be in the hands of every physician and apothecary.

Anatomy of the Human Brain, from the celebrated dissections of John Lizars, M. D., etc., of London. Comprising fifteen engravings, colored, with accompanying explanations. Edited by Landon Rives, M. D., Cincinnati. Published by Middleton, Wallace & Co., 1854.

This is a work designed to perfect our knowledge of the special anatomy of the brain. It is edited by L. Rives, M. D., and published by Middleton, Wallace & Co., Cincinnati. On looking through it, we were impressed with its accuracy to nature, and its value to every one engaged in the cultivation of medical science. Comprised within a small compass, the descriptions embrace every thing connected with the external and internal portions of the brain. To the student, just laying the foundations of this branch of science, it is invaluable,—while to the practicing physician or surgeon it will prove very available as a means of keeping well posted up.

The profession are under obligations to Dr. Rives, for having got up this edition of the work. We needed something of the kind, because accurate information on the subject of which it treats is indispensible to the practitioner of medicine and surgery.

Woman, Her Diseases and Remedies. A Series of Letters to his Class. By C. D. Meigs, M. D., Professor of Midwifery and the Diseases of Women and Children in the Jefferson Medical College at Philadelphia, etc., etc. Third edition. Revised and enlarged. Philadelphia: Blanchard & Lee. 8vo., pp. 666. For sale by Riley & Co.

These letters have provoked in the journals of the day some considerable amount of criticism, and this has been principally on their *manner*, rather than their matter. In getting them up, the author says that he has tried to avoid what he is pleased to term "the dullness and jargon which characterize so many medical writings.', In another connection he terms it "the dullness and time-honored '*clergyableness*' of the day."

In some things, it must be conceded there is as much in *manner* as there is in matter. This, however, is not so true when applied to science. Matter, here, is every thing--manner almost nothing. The discovery of a new truth, in whatever way expressed, never fails to make an impression. So far, however, as the communicating of truths is concerned, there can be no doubt about the policy of consulting *manner*. Somebody has said that the useful always makes its most forcible impression when associated with the agreeable. Orators understand this, and practice upon it. But the question comes up, what is agreeable? Upon this there is a diversity of opinion. In efforts at the "bar," or on the "stump," the acceptation would be very different from what it would be in the "pulpit." Just so the term "agreeable," applied to teaching science, orally or by familiar letters, must have its own kind of meaning. With some it would be most pleasing to make no departures from the dignified, dense and rigid style most favorable to perspicuity and accuracy. With others, the use of cant phrases, quaint expressions, new coined words, puns, anecdotes, etc., are regarded as being most agreeable.

With reference to the character of the language in which a speaker or writer chooses to dress his thoughts, it may be remarked that, as communication of thought is the chief end of language, one rule is, that perspicuity should not be sacrificed to any thing whatever, not even to beauty. Another rule, of not less importance, and that has had a general currency among those who understand themselves, is that the language ought to correspond with the subject. For heroic actions, elevated language is required; tender sentiments ought to be expressed in words soft and flowing; while plain language, void of ornament, is adapted to subjects grave and didactic. Against this latter rule the author before us is a great sinner. His work from beginning to end abounds with words, obsolete, new-coined, inelegantly compounded, vulgar; with phrases offensive, because too common with the herd, uneuphonic, because not in keeping with the gravity of science and the many delicate subjects connected with "Woman and her Diseases."

But if the blemish just noticed, like Fordyce's bad style, was *natural,* the rudeness, the disagreeable impression and mode, together with the bad example, might be endured for the sake of the many jewels in the way of useful facts that are brought forward by the author in his Letters. This, however, is not the case. The style is entirely *affected,* as its stiffness plainly indicates, and like affectation wherever seen, is any thing else than that for which there exists a relish in any one's composition.

The book before us, in our judgment, needed no such an inroad upon the style which has obtained in getting up didactic works, and which has been sanctioned by the judgment of the medical world. To the Temple of Science there is now a railroad, where formerly there was nothing, to use a Western expression, but a "blazed path." The author's reasons, therefore, for an infringement upon former customs, are not valid. We need nothing, except a good locomotive and an unobstructed track.

The *matter* of Prof. Meigs' work, as before intimated, is such as is needed, and as will prove available in the hands of every practitioner. We do not, however, wish to include in this every thing contained in the book. The detail of Miss Helen Blanque's case, and others of similar character, contain such a mixture of nonsense with science, and such a display of the polite "*granny,*" that the impression which it must make upon the novices in the profession, will certainly be very rich.

The work contains a large amount of matter on the physiology and pathology of woman, and inasmuch as it is impossible to crowd this all into a course of lectures, there seemed to be a propriety in publishing it in a separate volume. The volume is got up by Blanchard & Lee, in their style, which is sufficient evidence of its mechanical execution.

On Rheumatism, Gout and Sciatica, their Pathology and Treatment. By HENRY WILLIAM FULLER, M. D., Cantab., Fellow of the Royal College of Physicians, London; Assistant Physician to St. George's Hospital, etc., etc. New York, Saml. S. and Wm. Wood, 264 Pearl St., 1854. (For sale by Riley & Co.)

This is a work that we should like to review at some length. But our space forbids anything more than a notice.

Impressed with the belief that much that has been written about Rheumatism is loose and faulty, the author, at the suggestion of his colleague and former teacher, Dr. I. Wilson, senior physician to St. George's Hospital, undertook a review of the whole subject for the purpose of placing it upon a scientific basis.

He commences his work by calling the attention of medical men to what we presume they very well understand--that Rheumatism is deserving of careful study, not more because of its frequency than the suffering with which it is usually connected.

Of the reputed cause of the disease—*cold*, the author thinks unfavorably. The general and local effects of cold, as ascertained by observation and experiment, do not result in a train of symptoms or lesions of structure such as we usually have in rheumatism. Applied *locally* to a part, cold and moisture give rise to a sensation of cold, pallor and blueness of the skin, a shrunken state of the skin, arrest of the circulation, etc., but to little if any pain. The *general* effects of cold of course vary according to the condition of the organism. Its first usual effect where the circulation is natural, or active, is that of a decided stimulus. Rigor and the disposition to muscular contraction are at once manifest. Continued however for some time, chilliness, shivering, muscular and nervous exhaustion, diminution of the force of the heart's action, and general depression, are the consequences. This depression ends in stupor, sleepiness and death.

Such phenomena, it is contended by the author, are totally unlike what we have in rheumatism. Among them are no wandering pains, no redness or swelling of the joints.

Testimony is also referred to, going to show that *cold* and *even moisture* combined, have, under circumstances favorable to their operation, upon quite a number of individuals at the same time, failed to produce in any considerable number of them alterations such as we usually have in rheumatism. The Russian campaign is referred to, and also Captain Parry's account of a voyage for the discovery of a north-west passage, in all of which it is asserted rheumatism was unobserved as taking any part in the mortality. The following, bearing on the point, is instructive. It is taken from Capt. Parry's account of a voyage for the discovery of a north-west passage:

"We were constantly in the habit for some months of undergoing a change of from 80 to 100 deg., and in several instances of 120 deg. of temperature in less than a minute, and what is most extraordinary, not a single inflammatory complaint besides a slight cold, which was cured by common care in a day or two, occurred during this particular period. Throughout the expedition, the occurrence of rheumatism, or even indeed of rheumatic pains, was exceedingly rare!

Having disposed of cold as being incapable of exercising a sufficient causative influence, the author seeks for a solution of the question in another direction. He remarks:

"Many of the remarkable features of rheumatism are quite characteristic of a disease dependent upon a vitiated condition of the circulating fluid. Its attacks are ushered in by premonitory fever; its local symptoms are erratic, and yet remarkably symmetrical in their arrangement; the heart, the lungs, and other internal organs are affected and when metastasis occurs, the constitutional symptoms are such as are met with under similar circumstances in diseases known to be connected with vitiated blood."

The author calls attention to the distinction that exists between an inflammation excited by a local cause, as for instance by a blow, and the inflammation attendant upon an attack of rheumatism. Inflammation excited by a local cause never subsides in the spot first affected, to re-appear in some distant part of the body. On the contrary, whenever some poison or foreign substance, if the latter term is preferred, finds its way into the circulation, pus, for example, we are not surprised at the occurrence of symptoms at any point, however distant from the original seat of the mischief, because as the poison circulates with the blood to every tissue of the body, it may imitate and ultimately excite inflammation in several parts successively. We have just treated a case in which the inflammatory action manifested itself first in general muscular soreness, then in the joints of the superior extremities, then in those of the inferior extremities, and then within the cranium.

As it regards the source of the poison, the *materies morbi* of rheumatism, nothing is certainly known. Our author is disposed to attribute it to some obscure constitutional peculiarity or form of *mal*-assimilation. In proof of this it is suggested that the disease makes its appearance in deranged conditions of the organism, from causes known to impress unfavorably the nutritive and secretory functions.

Females affected with uterine troubles or excessive lactation are very much disposed to rheumatism. M. Chomel has been struck by the frequency of its occurrence after tedious attacks from fever, in the wards of public hospitals. But what removes the complaint most completely from the category of those owing their origin to cold and moisture, is the fact established beyond dispute that rheumatism, like gout, is hereditary. Upon this point much evidence has been collected that is unquestionable.

What the particular morbific agent is that gives rise to the phenomena of rheumatism, is a question upon which there is, since Prout made the suggestion, a goodly amount of unanimity among pathologists. All now think that it is *lactic acid* which is developed too freely in the system, in consequence of imperfect assimilation, and accumulates in the blood by reason of defective cutaneous action.

The *treatment* of rheumatism, after all, is the important matter. Usually there is no difficulty in the diagnosis. The demonstrations are very decided and unmistakable. But what is there in the domain of remedies that will cure it, is the question. Quaintly some one has said, that the remedy most efficacious is "six weeks." If this were true, it is fortunate that it does not interfere with the administration of drugs or the use of appliances. But to our author and the subject. In our judgment, he adds very little to our stock, poor as it has been, in the treatment of a severe case of acute rheumatism. His treatment is mostly made up of blood-letting, calomel, opium, colchicum and the alkalies. The suggestions in regard to the circumstances, &c., requiring the use of these remedies, are very judicious, and so far as the young practitioner is concerned, they will well pay a perusal of the book. Upon the *alkalies* he perhaps places more confidence than might have been expected by those who have used them—and who are familiar with about what they will accomplish. He states that his success with them has been astonishing, and he concludes that it is in consequence, "1st. Of their acting as restorers of all the alkaline condition of the system; 2nd. Of assisting to maintain the solubility of the fibrin, and thereby preventing its deposition on the valvular apparatus of the heart; 3rd. Of acting most powerfully as sedatives and calming the action of the heart and arteries; 4th. Of increasing the metamorphosis of tissue and proving active provocatives of an increased secretion of urine whereby the elimination of the *materies morbi* is assisted."

Besides Acute Rheumatism, Rheumatic Gout, Chronic Rheumatism, Sciatica, and other forms of Neuralgic Rheumatism are elaborately discussed and much light thrown around each one of them that will pay perusal.

PART FOURTH.

EDITORIAL AND MISCELLANY.

CHOLERA.—Our country has been visited again by this disease, and while we are journalizing this notice of its presence in the form of an epidemic in the West, we may say that our city, so far, during the present season, has suffered but slightly compared with some other places, or with previous visitations. Small towns, villages, or country places, seem to have come in for a greater share of the disease than formerly, while most large towns and cities, and many places that in former years were seriously afflicted, are now enjoying a comparative exemption. This circumstance shows that the disease is not confined to densely populated districts, as at one time was supposed to be pretty uniformly true, but that it finds in even very sparsely settled regions, and, indeed, sometimes in the wilderness itself, the conditions favoring a very high degree of malignity.

The question might be asked, how does the disease now compare in malignancy with former visitations? As far as we are able to judge of this from our limited observations and from the journals of the day, there is but little difference. We have been impressed with the belief that the proportion of deaths to the whole number attacked with the various phases of cholera, such as diarrhœa incipient, cholera morbus, &c., is less, and that the *duration* of the disease in cases of a decided character is also less.

What do we know of Cholera?

Do we know anything more now than when it first made its appearance among us? Such questions as these we would be glad to be able to answer. We of course have learned something, but, and we regret to say it, much has yet to be learned, and that too, in regard to some points the most essential.

Of the materies morbi, we are ignorant. It is believed now, however, not to consist in any special atmospheric condition, but to be a *material* substance. This substance, finding its way into any place, can increase under the influence of foul and damp air, with some degree of warmth.

The *transmission* of the material giving rise to cholera has a close connection with human intercourse. It is carried in the clothes of persons, in railroad cars, steamboats, in ships, etc. This fact was insisted upon in the Bengal Report of 1824, and the Swedish Commissioners of 1848, and many eminent men in both hemispheres, bear their testimony to the same point. At the same time, it by no means follows that the material cause spreads in no other way. A great deal of evidence has been accumulated, showing that its occurrence in different portions of a city or in different parts of a state or county, takes place independently of communication with the sick.

The facts which have been collected from different countries, and during the previous visitations of the epidemic in our own, upon the liability of nurses, and those most exposed to the exhalations of the sick room, to attacks of the complaint, are conflicting, and not generally thought to warrant the belief that the disease has a contagious property.

Several conclusions in regard to some points of the pathology have been reached. One is, that the early theory of the nature of cholera is correct. By those conversant with its early history and progress, it will be recollected that some of those whose opportunities were good for observing, describe the principal phenomena as consisting in *a separation of the water and salts of the blood through the intestinal canal.* This, which in the commencement was of rather a theoretical character, is now sustained by the experiments of the chemists. Besides, by their labors, the accuracy of our knowledge, although still not what would be most desirable, is increased, in regard to other things pertaining to the disease.

In a case of cholera, we have what may be called a *transudation period,* a period which embraces every change which the fluid undergoes in passing from its vessels into the alimentary canal. According to Schmidt, the intercellular fluid of the blood, that is, its serum and fibrin, is first affected, and water, salts and albumen pass off, and form the well known liquid discharges. The order in which the constituents of the intercellular fluid, (syrum) are affected in the transudation process, is, according to the same author, as follows: 1st. The water of the syrum passes off. 2d. The inorganic solids. 3rd. The organic. 4th. Chlorides before the phosphates. 5th. The salts of soda before the salts of potash.

As soon as the passage of the serum of the blood to the alimentary canal commences, another process of transudation commences between the blood corpuscles and the liquor sanguinis or intercellular fluid in which they float, and this takes place exactly in the same order, says Schmidt, as the constituents of the serum into the alimentary canal. The water more readily than the solids, the inorganic solids more readily than the organic, etc. Continued for a short time, a very abnormal condition of the blood corpuscles must be the result.

Among other things, their functions in the respiratory and heat-making processes would necessarily become subverted, and it may be, too, that it is in consequence of their loss of salts that we have the characteristic blueness (cyanosis) and coldness which takes place in cholera. Besides this, Schmidt found that the amount of oxygen which the blood corpuscles contain at the period of eighteen hours after an attack of cholera purging, was one-half less than the healthy proportion.

While the transit is going on between the blood vessels and the alimentary canal, of course the current from the blood into the structures for nutrition, secretion, innervation, etc., becomes impaired, and as a consequence, deranged muscular contractions, (cramps) and suspended secretions of most of the organs, are, it seems, reasonable to presume, among the results.

The gravity of a case of cholera has generally been supposed to have a necessary relation to the amount of serum discharged from the alimentary canal. During the prevalence of previous epidemics and also of the present one, facts have occurred under the observation of quite a number of medical men, which go to show that such is not always the case. It is true that it may be the rule, but there are exceptions to it. In tropical regions the stoutest subjects have been noticed to fall into collapse, without scarcely any discharge at all from the bowels. This, we are compelled to believe, is also true, though less frequently in temperate latitudes.

Treatment.—From what we have said it would seem reasonable that the principal thing to be aimed at in a remedial effort should be, the arrest of the intestinal transudation, a reverse of the current which is pouring from the blood vessels into the intestinal canal. How is this to be done? Among other things, one fact of importance has been reached, and although the process of getting at it has been purely empyrical, it is not the less valuable. It is this: if the diarrhœa be arrested in its incipient period, the abnormal changes in the composition of the blood will most likely not follow. In the stage of collapse, something is required that will replace the healthy proportion of the constituents of the liquor sanguinis and the blood corpuscles. To do this, nothing has been proposed that has a sanction higher than empyricism. Science, although industriously invoked, has yet revealed nothing that can be regarded as available.

A plan needs to be suggested that will get the potash salts back into the blood globules, and the water into both the globules and the fluid in which they float. Schmidt, as we have seen, traced the order in which these constituents leave their places in the vital fluid, where in health they are retained with a number of others in such nice and accurate relationship; but who is there that can point out the mode of getting them back, which is the same thing as pointing out the mode of curing cholera when in the stage of collapse?

STARLING MEDICAL COLLEGE.—The Annual Announcement of this Institution is upon our table, and from it we select the following:

"The Trustees of Starling Medical College, in issuing their Eighth Annual Announcement of Lectures, are happy in being able to present to its friends the substantial evidences of its continued success and prosperity. Notwithstanding the diminution of the number of medical students in the country for several years past, this school has maintained its numbers with but slight variation. Each succeeding year has shown a steady advance in the extent of preliminary preparation, and the higher aims of those seeking to fit themselves for the practice of medicine and surgery. The talents, attainments and high moral qualifications of our classes, have been to us a most flattering guarantee that our labors have been approved by those whose favor we so highly esteem.

"We now feel assured that we can offer increasing advantages and conveniences for the generous patronage that has thus far been extended to us, and that the student of medicine will find as complete and extensive a course of instruction in this school, as the time allotted for Lecture term will permit.

"The Trustees have now effected an arrangement which they have long felt was necessary to the highest success and prosperity of the Institution. Heretofore, a portion of the Faculty have been non-residents, and consequently less intimately identified with the school, and, from their absence, except during the Lecture term, less able to devote the time and labor which its interest required. The organization as now completed, is constituted wholly of resident members. This secures that unity of effort that must accumulate strength, which, together with the promptings of personal ambition and interest, the fair attainments, the concentrated and continued labors of all in the school for the whole year, will, they think, secure to it advantages that are not otherwise attainable. Under this arrangement, all pecuniary embarrassments will be removed, and provision made for adding to the means of illustration, and all the facilities of teaching; and the course of lectures in each department will be continued through the whole session. We deem it unnecessary to go into details in reference to all the departments; only to say, that valuable additions will be made to that of Anatomy, both by the Professor, and by a gentleman fully competent, whose services have been secured, and whose time will be devoted entirely to supplying and arranging preparations for this department, and that of Pathology.

"To the profession of the West, who have long been acquainted with Professor Dawson, through his numerous and valuable contributions to medical literature, we need say nothing of his general qualifications and professional zeal; and those who have had the advantage of his private instruction in this his favorite department, will still less require any commendation of him from us.

"MATERIA MEDICA.—The chair of Materia Medica will be illustrated by a beautiful and complete suite of medicines, of the finest quality, furnished by Messrs. Philip Schieffelin, Haines & Co., of New York, aided by numerous finely executed botanical plates. The fine attainments, zeal and industry of Prof. Hamilton, are a sufficient guarantee that this department will be fully sustained.

"CHEMISTRY.—The Professor of Chemistry, who at present occupies the same chair in Capital University and Esther Institute, of this city, will bring to his department the experience and zeal which have made him so successful and acceptable a teacher in these two Institutions. Prof. Wormley, having given special attention to organic chemistry, will direct his course to the wants of the medical student in elucidation of Physiology and Pathology. He brings to his aid an apparatus, new, and as complete as any in the West.

"SURGERY.—The reputation of Prof. Moore, won by years of successful teaching in Eastern schools, was fully sustained by the gratification and acceptance with which his course was received last winter, by an intelligent and appreciating class. Prof. Moore, now permanently located in this city, will give his undivided attention to his chair and the practice of surgery.

"LECTURES.—The Lectures will commence on Wednesday, the 18th of October, and continue for twenty weeks, ending Tuesday, the 6th of March. All students are earnestly invited to be present at the beginning of the regular session, that they may avail themselves of these increased privileges, which they will receive without an increase of lecture fees. This extension of the lecture term is made with a view of accommodating students with fuller courses in all the departments, and at the same time avoiding the crowding of lectures so as to burthen and weary; thus supplying a want that has long been acknowledged. We now cheerfully and hopefully present our claims to the medical public, believing that the central position of Columbus, its rapid increase in population, wealth, and all educational privileges, the facility of access by extensive railroad connections, the variety and cheapness of accommodation for boarding, book stores, etc., which it presents to the medical student, make it beyond a doubt one of the most eligible sites for a medical school."

The increase of the Lecture term to five months, is a measure founded upon an enlightened consideration of the subject of medical education. The amount of matter to be taught, and the length of time usually devoted to it by our colleges, bear to each other no proper proportion. This has been long felt, and in older countries the remedy has been applied by courses of lectures that extend through ten months of the year.

Besides the departments proper, which formerly entered into a course of lectures, others have sprung up which demand attention from those whose ambition it is to get even into the ranks of decent mediocrity. Among these we may include Physical Diagnosis, Organic Chemistry and Microscopy. In regard to these subjects, enough is now known of their relations to utility, to make it a matter of grave consideration whether any one is justifiable in attempting to exercise the functions of a physician, without spending a portion of his time in acquiring some knowledge of them. The schools of the country will, without any doubt, all, sooner or later, fall into ranks upon the proper reform, for nothing in the end, but good consequences, can be the result.

SEVENTH VOLUME.—With this number the seventh volume of this Journal commences; and brief as its career has been, it would have been a fruitless time, if some things had not occurred during its progress that afford a little food for reflection. From data that are reliable, it is altogether probable that since our Journal was started, not less than 180,000,000 of human beings have passed from the earth's surface, and are now in the future state. Among these, of course, are a great number of medical men, many of whom have reached a premature end from the exposures and privations connected with their professional duties. But inspired with the truth of the maxim, "*Homines ad Deos nulla re proprius accedunt, quam salutem hominibus dando,*" they have always been ready to execute their mission, regardless of consequences. Within the time of which we have been speaking, a Butterfield and a Howard were here, and besides occupying a prominent place in our society, were connected with this Journal as editors. Where are they now? Gone, in company with a large number of others of our profession, to the invisible world. The force of such truths cannot fail to make the impression upon us all, that our lives, at most, are of but a moment's duration, and our earthly mission, of which we are often so vain, of but small consequence among the numberless purposes that pertain to humanity.

But leaving the shaded and turning to the bright side of the picture, it may perhaps be safely submitted that within the same time, the number who have come into the world, the births, have more than equalled the deaths, and the population of the earth has after all been increased. Now of this one hundred and eighty millions or more of new-comers, who knows but that there may be among them some Hallers, Sydenhams, Boerhaaves, Laennecs, Coopers, Hunters, Physics and Drakes, who, having the advantage of commencing with the capital scientific that has been accumulated by the labors of the present generation, will be enabled to arrive at results still more extraordinary than any to which we have yet attained.

But, says the reader, what have you got to say about the Journal itself? Well, it has had its period of gestation, its accouchement, its days of childhood, when it could not stand without assistance, and it is now struggling for the nourishment and vigor necessary to impart to it a strong constitution. What say its friends, those who have heretofore ministered to its wants? Shall it still have the *protein* that makes blood, and imparts the properties so essential to its usefulness? We shall see. Of our own connection with it thus far, we can say: *Labor ipse voluptas.*

To all, it must be very evident that we are upon the threshold of much that promises great usefulness in the way of new discoveries, flashes of which have already appeared in the scientific horizon to those who have been on the look-out. As such become obvious, they will be indicated from time to time in the pages of the Journal. Again, our present stock of information, like what occurs in the human body, has every once in a while to be subjected to the sloughing process. Useless things require to be removed. Inert drugs and useless appliances that have been living upon the sanctions of perhaps a *fallacia accidentis*, have been accumulating on our hands from year to year, until they have become really injurious, and need now to be thrown off, to give room for things more in the line of utility.

Upon such things, and others, looking to the purity, interest, etc., of the profession, the Journal will be engaged the coming year.

In this connection, we embrace the opportunity to request our readers who are in the field of observation, to communicate to us every thing of interest that comes in the way. The field of the West and South is so vast, and its diseases so numerous and complicated, that many things are continually occurring that should be recorded for present and future use.

CHLOROFORM.—Some fatal cases of late have been occurring under the use of this article, and we regret to say it, in the most careful hands.

UNIVERSITY OF LOUISVILLE—ITS LAW SUIT.—It is perhaps known to most of our readers that a law suit has been going on for some years, that related very intimately to the future of the medical department of this Institution. No sooner were demonstrations made that the school was about to be one of the most successful, than measures were concocted for changes in its organization, such as, had they been successful, would have resulted in throwing its government into hands that would have embarrassed its operations and destroyed its ability to accomplish the purposes for which it was instituted. These measures ultimately assumed the shape of a law suit, which took the court rounds, and after affording the usual amount of annoyance, has at last been decided by the Court of Appeals in such a way as to leave the property and the administration of the school in the hands of the old Board of Trustees; consequently, things will go on as heretofore. We rejoice to record this triumph of right and justice.

THE LATE DR. WALDO J. BURNET.—This distinguished young man died July 1st, a few days before the completion of his 26th year. Dr. Burnet had not the advantage of a collegiate education. After mastering the studies of the Academy, he at once entered upon those of the medical profession. While engaged in the latter, he gave evidence of an active, brilliant intellect. The subject of his first essay was *Cancer,* treating especially of its microscopic structure; and the second was on *The Sexual System, or the production of "being," considered as to its Physiology and Philosophy.* In 1852 he prepared the principal work of his life, the essay on *Cells,* which received the prize from the American Medical Association.

STARLING HALL.—We call the attention of the profession to the advertisement relating to this Institution. It is arranged in an efficient and comfortable manner, with special reference to the treatment of the diseases enumerated. Medical men having cases of the character indicated, which they find it inconvenient to treat in private practice, will do well, we should think, to send them to Starling Hall, where they will find the best of medical services, with all the facilities that can be desired.

New Books.—Besides the books noticed in this number of the Journal, we have received of the publishers, Blanchard & Lee, *Bennet on Tuberculosis*, and *Parker on Syphilis.* Both of these are works of decided merit, and we shall review them at some length in our next. They are on sale at the book store of Riley & Co.

Dowler on Yellow Fever.—We have received from Dr. Bennet Dowler, of New Orleans, his Tableau of the Yellow Fever of 1853, with sketches of the Epidemics of New Orleans since their origin in 1796, illustrative of the quarantine question. To those who are acquainted with Dr. Dowler, we need say nothing in regard to any thing that emanates from his pen. The pamphlet before us contains the evidence of much research and close thinking on the quarantine question, the great question with the citizens of New Orleans. Perhaps in our next number we again will allude to this subject. In the meantime we thank Dr. Dowler for sending us a copy of his labors.

Indiana Medical Journal.—We are in the receipt of this, the first number of a new periodical, which is published at Evansville, Ia., and edited by W. H. Byford and Hugh Ronald, Professors in the Evansville Medical College. The appearances of this Journal are very good, both as relates to size and contents. We wish it may meet with success.

Dr. Asa Lincoln, of Brimfield, Mass., recently committed suicide by starvation.—*Exchange.*

Perhaps it would be about as near the truth to say that he died of insanity, as it is probable that no sane individual ever committed suicide by any means, but last of all, by that of starvation.

Kentucky School of Medicine.—From the Annual Announcement of this Institution, we learn that Dr. L. M. Lawson has been elected to the chair of Theory and Practice of Medicine, and Clinical Medicine. While we congratulate the Kentucky school on this accession to its Faculty, we deplore the policy which has resulted in the loss of Prof. Lawson's services to our own State.

[From the Western Journal of Medicine and Surgery.]

Medical Appointments.—Our friend, Dr. John Dawson, editor of the Ohio Medical and Surgical Journal, has been elected Professor of Anatomy and Physiology in Starling Medical College, at Columbus. Dr. Dawson is one of the most industrious men in our profession. He has been working hard all his life, and by persevering study has made himself an accomplished physician. We rejoice in his success, and feel that we venture nothing when we predict, that he will fill worthily and acceptably the chair to which he has been called by the Trustees of Starling Medical College.

We record with pleasure the appointment of another worthy member of the profession to a place in another Medical College. John A. Warder, M. D., has been elected to the chair of Chemistry in the Medical College of Ohio, long adorned by the talents of Locke. Dr. Warder has a decided taste for natural history, and will delight in the researches of the laboratory. We hope that he and his colleagues may be successful in giving stability to the organization of this College, which has been so long a theater of revolution and change.

In the Medical College of Virginia, at Richmond, Dr. Beverly R. Wellford, late President of the American Medical Association, has been selected to fill the chair of Materia Medica, and Dr. Brown Sequard as Professor of the Institutes of Medicine. The "mother of States" seems to be waking up to her interests, in regard to medical teaching, and to be in earnest about sustaining her Medical College at Richmond. The appointments just mentioned are as good as could have been made.

We regret to learn that our esteemed friend, Prof. Bartlett, has not yet so far recovered in his health as to be able to discharge his duties in the College of Physicians and Surgeons of New York. The course on Materia Medica will be given, next session, by Prof. Smith, the course on Practice by Prof. Alonzo Clark, and the course on Physiology by Prof. Dalton. Prof. Dalton is comparatively a young man yet, but he is acquiring great distinction as an original investigator, and as a lecturer on medicine we have no superior in our country to Prof. Clark. The College of Physicians and Surgeons of New York is venerable for age, and most respectable for the ability and dignity of its corps of professors.

We find the following notice in the last number of the Medical Examiner. We have the pleasure of knowing Dr. Stillé personally, and heartily indorse every word of the editor in respect to him:

"MEDICAL DEPARTMENT OF PENNSYLVANIA COLLEGE.—We learn, with much pleasure, that the Trustees of this Institution have lately appointed Drs. Alfred Stillé and John Neill to the chairs of Practice of Medicine and Surgery. These selections are eminently judicious, and must greatly strengthen the school. Dr. Stillé is one of the physicians of St. Joseph's Hospital, of this city, and was for many years lecturer on the Practice of Medicine in the Philadelphia Association for Medical Instruction, in both of which positions he has acquired a high reputation as a sound and eloquent teacher. Dr. Stillé is also well known to the profession as a frequent contributor to our medical literature. His work on Pathology is highly esteemed, and his report on Medical Literature, presented some years ago to the American Medical Association, will long be remembered as one of the most brilliant papers ever recorded in its transactions.

"Dr. Neill, we think we may safely say, combines many qualifications for the responsible chair which he has accepted. He was for several years Demonstrator of Anatomy in the University of Pennsylvania, and there established a reputation as one of the best anatomists and lecturers in our country. For some years he has occupied the situation of Surgeon to the Pennsylvania Hospital, and has delivered several courses on Clinical Surgery. From his position in this great school of Surgery, and from his long experience as a lecturer both on Anatomy and Surgery, Dr. Neill's success as a lecturer on the Principles and Practice of Surgery may be confidently predicted."

In the University of Edinburgh, Prof. Forbes, one of the most zealous and eminent naturalists of the age, has been elected to the chair of Natural History, long filled by Prof. Jameson.

MEDICAL COLLEGES.—In our advertising department will be found the Announcements of quite a number of our Colleges, to which we call the attention of our readers. The facilities of Colleges in the West and South for the purposes of medical instruction, are generally now of such a character as cannot fail to render satisfaction as complete as can be obtained any where.

Trial for Manslaughter—Medical Testimony, &c.—The following case may prove interesting to the profession, as showing, to some extent, the kind of medical testimony upon which criminal prosecutions are sometimes founded.

On the 26th day of July last, Miss E. M. Smith, a beautiful and intelligent young lady, who is engaged in teaching a school in this city, was arrested and brought before Justice Bates, on a charge of manslaughter. Upon the examination it appeared that, upon the 22d day of June, Miss S. had punished a boy (9 or 10 years old) by whipping him with a green switch, about half an inch in diameter at the butt, some two feet long, and tapering off to a point; and that during the whipping, some three or four blows fell upon the head, two of which raised small stripes or welts, which remained for some four or five days. The teacher was represented as having corrected the boy not in an angry or excited manner, but properly and mildly. No unusual effects were observed upon the scholar at the time. He remained until the close of the school, and spelt in his class as usual. In the afternoon he complained of some headache, and on the next day (the 23d) he vomited and bled at the nose. On the 24th he was at school again. At night he complained of some headache and nausea, and was quite restless. On the 25th he took some patent pills, but got no benefit from them. On the 26th he was confined to the bed, and on the 27th Dr. Grafton was called to see him, and continued in attendance until his death, which took place July 7th. This is the substance of the non-professional testimony in the case. For the prosecution, Drs. Grafton, Ball, Lewis and Wood, were called; and for the defense, Drs. Mack, Chittenden, Barrows and Pease. We will give a brief synopsis of the testimony of these gentlemen. Those portions of the testimony of Drs. Grafton and Mack, which are italicised, are to be compared with each other, that their disagreement may be fully noted.

Dr. Grafton sworn.—Was the attending physician in this case. Called first, June 27th. Patient had no high fever at any time. Saw nothing resembling fever. Skin usually of natural temperature; often cool and sweaty. Pulse at no time frequent and strong; towards the last, frequent and feeble. Tongue had a whitish, or light yellow coat. Bowels rather costive. Vomited once or twice after he saw him. A little delirious once or twice when roused to take drink or medicine. This was only momentary. July 2d had a slight spasm of the arms and legs, which he (Dr. G.) attributed to irritation from operation of physic. No other convulsions at any time. Eyes never suffused or injected. Thought the pupils at one time not so large as they should be, considering the light in the room. Eyes were sensitive to light, and he complained of noise hurting him. Had violent paroxysms of pain in ears and eyes; face would flush, and he would cry out, " Oh my eyes! oh my eyes !" Began to sink into a comatose state on the 5th, and died comatose on the 7th, at 8½, P. M. Conducted the post-mortem. No evidences of external injury. *No passive congestion about the brain. Membranes injected with arterial blood.* Some gelatinous effusion upon the convolutions of the brain. Membranes adherent to the brain at a point on the top of the head, an half inch by two or two and a half inches in size. *Arachnoid thickened at the base of the brain. Adherent to pia mater on the surface of the hemisphere. Six or eight ounces of turbid effusion in the ventricles. Some flocculi of lymph in fourth ventricle. No tubercles in the lungs. Mucous coat of stomach and bowels perfectly healthy. Considered the case one of well-marked inflammation of the membranes of the brain, affecting their entire substance. Symptoms were such as would not be present in any other disease. Pathological appearances unmistakable. The gelatinous effusion could not be produced except by inflammation. Believed the whipping was the exciting cause of the disease; that it must have operated by producing concussion of the brain.* Made up his opinion that the blows were the cause of the disease, *from the absence of all other causes in this case. Thinks he could have detected any other causes if they had been present.*

Dr. Ball sworn.—Has heard the testimony in this case. Has no doubt that the boy died of inflammation of the brain produced by the whipping. Whipping produced concussion on the brain. *Cross-examined*— Been practising some twenty years. Been to California. Is now improving a farm. Preaches some on Sundays. Has no doubt that the blows produced concussion on the brain. Counsel asks— What is concussion of the brain? Witness hesitated a long time, and at last, when the question was repeated, said " they must excuse him, he was so confused he could not tell."

Dr. Lewis sworn.—Was present at the post-mortem examination. Thinks the case was one of inflammation of the brain, or hydrocephalus. Thinks the blows were the *remote* cause of the disease. Congestion of the brain was arterial. *Cross-examined*— Arterial congestion all over the brain. Could not tell in what membranes.

Could not tell what vessels were congested. Afterwards said he could tell, but would not. Is a regular practising physician. No body's business whether he ever graduated or not. Finally, said he had graduated at Fairfield. Did not receive a diploma. Students often graduate without receiving diplomas. Counsel here inquired if there were not two methods of graduating, one with white and the other with black balls, and if it was not in the latter method that no diplomas were given?

Dr. Wood sworn.—Has heard Dr. Grafton's testimony, and fully concurs with him in his views in relation to this case.

DEFENSE. *Dr. Mack sworn*—Was consulting physician in this case. Had disagreed entirely with Dr. Grafton in their consultations. Considered the case to have been one of bilious remittent fever of a low type. Had advised a gentle tonic plan of treatment. Patient at one time took thirty-five grains of quinine, by his advice, to arrest a chill that was expected in the morning. Thought the patient was decidedly better after taking the quinine. Dr. Grafton refused to continue the tonic and sustaining course of treatment after the quinine was given, but placed the boy upon the use of calomel, morphine, croton oil, digitalis, antimony, wine of colchicum and nitre. He continued this course until the day before the patient's death. Believes these articles were highly injurious, the disease being one of a low grade of action, with at no time any high vascular excitement. Thinks the patient died of passive congestion of the brain, supervening upon a state of debility; that the persistent use of opium, digitalis and tartarized antimony, had directly tended to this result. Was present at the post-mortem examination. Meningeal vessels deeply congested with *dark venous blood.* Slight gelatinous or jelly-like effusion between the convolutions. Considered this the result of the simple congestion alone. *Might be produced by inflammation, but by itself was not positive evidence thereof.* Thought the small spot of adhesion of the dura mater on the top of the brain not recent. Judged by its firmness, and the absence of any effusion or discoloration in its vicinity. There was no plastic or organized lymph, or liquid or concrete pus found at any time during the examination. *There was no abnormal thickening or adhesion of the arachnoid.* This membrane is thicker at the base of the brain, and it is adherent by fine cellular substance to the pia mater over the surface of the hemispheres. Fluid in the ventricles was allowed to escape and run out upon the table, mixing with the blood, *so that it* *was impossible to determine its character or quantity. Saw no flocculi of lymph in the fourth ventricle. The lungs were not examined. Saw nothing at the post-mortem examination, and had heard no testimony during this trial, that would justify him in attributing, in any way, this boy's sickness and death to the whipping he had received.* Inflammation of the brain from external injury would occur directly, in one of two ways. Either traumatic inflammation originating at the point of injury and traceable directly thereto, or inflammation ensuing upon the re-action from concussion, frequently originating at a point remote from the seat of violence, and exhibiting upon a post-mortem examination no pathological connection between the external injury and the inflammation which had followed it. In these cases, the fact that the brain had suffered from concussive force, must be shown from the character of the symptoms which followed the infliction of the blows. *In the case now under consideration there were none of the symptoms of concussion of the brain described as having been present at the time of the whipping, and, in fact, the character of the whip used was such as to preclude the possibility of any such effect having been produced.* Even if this case had been (as Dr. Grafton assumes) one of simple acute meningitis, *still no man could honestly and intelligibly testify to the absence of all other causes except the whipping to have produced it,* as there are some causes of this disease which are wholly unknown, and the presence of which, herefore, *even Dr. Grafton himself would not be able to detect.*

Drs. Chittenden, Barrows and Pease, were sworn. Were all present at the post-mortem examination. They coincided with Dr. Mack in his description of the appearances observed, and sustained him in his views in relation to the case.

This closed the defense. The Justice promptly dismissed the complaint, and the citizens presented Miss Smith with a beautiful gold watch and chain as an evidence of their sympathy for her in her unjust and malicious *persecution.—Boston Medical and Surgical Journal.*

STARLING MEDICAL COLLEGE.—Prof. Moore, of Rochester, has been appointed to the chair of Surgery in this Institution, and will remove to Columbus to take up his permanent residence. Dr. Moore is a highly educated and skillful surgeon; has passed through a rich experience, and has all the qualities as a man and a lecturer to make himself deservedly popular wherever he goes.—*Buffalo Medical Journal.*

Cholera —Immediately wrap the patient in a sheet wrung out of boiling water with a dry blanket over the sheet. The purging is to be checked by appropriate means; if it continue, with vomiting and thirst, large quantities of cold water are not to be allowed; but small quantities of iced water or portions of ice. Afterwards, he may have a teaspoonful of brandy and a half a wine-glassful of soda-water every five or ten minutes; or ten minims of laudanum in soda-water, with or without brandy, as it may suit the stomach. A solution of the nitro-muriatic acid is useful sometimes, given with a little syrup of poppies. (Mr. Barwell, *Monthly Journal, Jan.* 1854, p. 50.)

Mix from ʒ ss. to ʒ j. of the undiluted nitrous acid, according to the severity of the symptoms, in from ℥ iv. to ℥ vj. of some aromatic waters. If there be restlessness and pain, add forty minims of laudanum. A quarter of this mixture to be given every two, three, or four hours according to the urgency of the vomiting and purging. It may be given in a cup of thin gruel, nearly cold. If rejected it may be repeated in ten minutes. No food should be taken for half an hour afterwards. (Mr. R. H. Whiteman, *Assoc. Med. Jour. Dec.* 2, 1853, p. 1063.)

1. The "rice water" vomit and purging require to be energetically subdued by quinine, sulphuric and other acids, creasote, nitrate of silver, and such like remedies. 2. In actual and threatened collapse, external warmth, stimulant embrocations, and those internal stimulants which act on the capillaries, are of signal benefit. 3 In reaction, and during convalescence, local inflammations and congestions require to be guarded against or subdued; and rational means must be adopted to restore the secretions of the liver, kidneys, and skin, but particularly of the two former. 4. Lastly, though not of less importance, the character of the fever should be modified, and a repetition of the paroxysm guarded against, by change of air, or by the administration of quinine, which, in the majority of cases, from the existence of anemia, ought to be conjoined with iron. (Dr. Cormack, *Assoc. Med. Jour. Nov.* 11, 1853, p. 993.)

Dyspepsia, *from Defective Action of Excreting Organs.*—Enjoin a light and simple diet, with water for drink, fresh air and exercise, and medicines that increase the secretions of the liver, kidney, and bowels. Blue pill and black draught do well enough for strong people. In other cases, 15 grains of sesquicarbonate of soda, and as much potassio-tartrate of soda as will act gently on the bowels, may be given. To relieve the acidity, fifteen grains of the bicarbonate of soda or the bicarbonate of potash may be given two or three times a day, two or three hours after the principal meals. At the same time keeping up a free action of the bowels by blue pill, or colocynth with henbane. If total abstinence is not feasible, the best drink is pale sherry or brandy largely diluted with water. If we have oxalic acid deposit and freedom from red deposit, the best remedy is the nitro-muriatic acid, eight to twenty minims of each twice a day in a glass of water, half an hour before breakfast and half an hour before dinner. If there be a red deposit, however, from lithic acid or lithate of ammonia, give, instead of the mineral acid, the carbonate or the aromatic spirit of ammonia. Sugar in this kind of cases should as much as possible be avoided. (Dr. G. Budd, p. 98.)

Slow and Imperfect Digestion.--We must first give remedies which increase the flow of gastric juice. The diet and habits must be regulated. The stomach must not be oppressed by new bread, tough meat, or malt liquors; and bodily fatigue and nervous exhaustion must be avoided. Half to two grains of ipecacuan; three or four grains of rhubarb, or these with a grain of capsicum in a pill, may be given before dinner. Salt and mustard are also stimulants. Ipecacuan would seem to be the most powerful of any of these. A glass of water and a lump of sugar after a meal will sometimes relieve the uneasiness. The muriatic and nitro-muriatic acid taken half an hour before meals are also useful. Alkalies must not be given, as they weaken the gastric juice. If the food undergoes fermentative changes, and sulphuretted hydrogen is given off, producing belchings like rotten eggs, half a minim of creosote may be given in a pill at the time of meals. If the fermentative change be accompanied by distension and eructation of inodorous gas (carbonic acid,) nitro-muriatic acid and the stimulant dinner pills just named will be useful. If the fermentative change produce lactic acid, then we have every thing taken turning to an acid; in this case we must give alkalies, and before meals bismuth and magnesia, and brace the walls of the stomach with the mineral acids, especially the sulphuric. (Dr. G. Budd, p. 94.)

When the food lies heavy on the stomach, as in people at the turn of life who lead sedentary lives, give small doses of ipecacuanha, from a quarter of a grain to two grains, in the morning, fasting, so as to cause a slight feeling of vermiculating motion of the stomach.

but not to cause nausea, and gradually increase the dose if necessary; one grain may be mixed with two grains of rhubarb, and given just before meals. Small doses of rhubarb, ginger and pepper; one grain of rhubarb, with one grain of cayenne pepper in the form of a pill, also give relief in these cases.

Painful Digestion.—Bismuth is one of the best medicines when pain or cramp accompanies digestion, and where there is no ulceration. It restrains undue secretion, and thus differs from ipecacuanha, which promotes it. It is best given a short time *before* meals, ex. g., ten grains three times a day. Another good medicine in such cases is hydrocyanic acid, which is chiefly useful to relieve pain of the stomach when it is empty of food; combine it with soda. (Dr. G. Budd, p. 105.)

Accompanied with Oxalate of Lime in the Urine.—A solid animal diet with little bread and vegetables, no fruit, very little sugar, or vegetable acid. Give the mineral acids. These do for oxalate of lime what the alkalies do for uric acid deposits. Give each acid separately. Give dilute sulphuric acid when an astringent is wanted, as in colliquative perspiration, menorrhagia, hemoptysis, and diarrhœa: hydrochloric acid when digestion requires assisting. The stomach liberates this acid for the purpose of digestion. Give both this and the dilute sulphuric acid before the meals. Give dilute nitric acid when the secretion requires to be increased; it is the opposite of sulphuric acid in its action. Sulphuric acid, therefore, astringes; hydrochloric promotes digestion; nitric promotes secretion. To prevent these acids acting on the teeth, wash the mouth out with a teaspoonful of aromatic spirit of ammonia in a little water, immediately after taking them. They should all be taken on an empty stomach. (Dr. Bence Jones, *Medical Times, May* 6, 1854, p. 454.

Ovarian Cyst cured by the Tincture of Iodine administered internally.

By Dr. Ficinus.

Dr. Ficinus is not the first who has attempted to cure ovarian cysts by the tincture of iodine. Such preparations have long been recommended both in England and in France. For some years the employment of the remedy internally, has fallen into oblivion, and iodine has been used for the treatment of ovarian cysts by injection only. The danger inseparable from this latter mode of its employment, has deterred the general body of practitioners from adopting it. The means pursued by the author are not exposed to the same reproach, and we relate his case, without expressing an opinion as to the prospect of others being found equally satisfactory in other hands. Dr. Ficinus was called, in April, 1853, to a woman aged 21 years, married eight months, and supposed to be enciente. For some days she had experienced severe abdominal pains, such as prevented manual examination of the part. Nevertheless, it was supposed that a distinct fluctuation could be felt over the tumor in the hypogastric region. Upon examination per vaginum, it was ascertained that the neck of the uterus was shortened, as might be the case in the fifth month of utero-gestation. The patient had never felt the movements of the fœtus. This examination, although incomplete, induced Dr. Ficinus to believe in the existence of an ovarian cyst. He ordered infusion of the leaves of digitalis with nitrate of potass; cupping to the abdomen, followed by mercurial and iodine frictions. Under the influence of this treatment, the condition of the patient improved, the fever and pain diminished. A fresh examination confirmed the diagnosis of encysted dropsy of the ovary. He then prescribed 25 drops, repeated thrice a day, of equal parts of tincture of iodine, aconite, and digitalis. Ultimately the dose was increased to 35 drops. About the middle of the month of May, the tincture of aconite was replaced by the tinct. lem. colchici. Improvement went on so rapidly, that, by the middle of the month of July, the patient resumed her usual avocations. The abdomen was much reduced in size, but an indolent tumor of inconsiderable volume was still felt at the inferior part of the left hypogastrium.—*Allegemeine Medic. Oentr. Zeit., March* 18, 1854.

Upon the utility of Injections of Iodine into the Cavity of the Peritoneum. By M. Rodolfi.

In order to appreciate this method, which has become popular by some amount of success, and is gradually acquiring more regular conditions of application, M. Rodolfi confines himself to five observations, and these are examples both of failure and of death.

[We have room for only three.]

Observation 1.—A man, aged 48, the subject of ascites for the last two months, had been twice tapped, and been treated by frictions of different kinds without success. Upon the 8th of September, 1852, a third puncture was made, after which the integrity of the viscera was ascertained. There was then injected about three ounces of distilled water, three drachms of tincture of iodine, and forty grains of iodide of potassium, into the abdomen. The fluid did not return. This was followed by febrile re-action for four days, the pulse beating 115. Severe peritonitis, requiring the repeated application of leeches, ensued; and, although the active treatment subdued the urgent symptoms, the patient suffered from diarrhœa and emaciation. On the 19th the ascites were re-produced. Death ensued on November 5.

Necropsy.—There were twelve ounces of fluid in the peritoneal cavity; chronic peritonitis; enlarged mesenteric glands; the portal vein inflamed, and partially obstructed by false membranes.

Observation 2.—A man, aged 32, became ascitic for ten months in consequence of intermittent fevers. Iodine injections were performed July 27, 1852. A moderate amount of inflammatory action ensued. On the 31st, ascitis was again perceptible.

August 15—A second injection, with the same results. At the end of twenty days there was re-appearance of the fluid, accompanied by rapid emaciation. Death, September 17.

Necropsy.—Abundant serous effusion; hypertrophy of the liver and spleen; chronic peritonitis; numerous points of suppuration in the parietal peritoneum; inflammation of the portal, splenic, and mesenteric veins.

Observation 3.—A man, aged 27, scrofulous, the subject of frequent brochitis and obstinate diarrhœa, had suffered from ascites for three months. For two months he had been treated without success by iodine, mercurials, and diuretics. November 1, the first puncture was made, and iodine injected into the peritoneum. Severe pain over the whole abdomen ensued, and leeches were applied. On the 6th the fluid re-appeared, and became the more abundant as the condition of the abdomen was more natural. Dyspnœa, emaciation and weakness supervened, and he died November 30.

Necropsy.—Twenty pints of serum in the abdomen; arterial injection of the peritoneum; cirrhosis of the mesenteric glands, with several centres of suppuration; a varicose condition of the mesenteric veins.—*Gazetta Medica Lombardia, April* 18, 1854.

Hospital, death of.—The London Hahnemann Hospital has died—*ex necessitate rei*—and its effects sold at auction.—*West. Lancet.*

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*Prize Essay Read before the State Medical Society, on Difficult Labors and their Treatment.* By M. B. Wright, M. D., of Cincinnati.

> "True things instead of pleasant things."

The eagerness with which the professional mind has engaged in its search after undiscovered truth, or in its efforts to revive rejected opinions, has given it often a proclivity to extremes. These extremes, like opposite promontories of a great continent, are of little exclusive value. Their importance consists in the facilities and inducements they may have offered, for the exploration and cultivation of the space which lies between.

These remarks apply, not only to the Science of Medicine in general, but to its obstetrical department. General principles have been established as lights for our guidance, and the successful application of many has stamped them with a true value, but errors in practice were introduced at an early period, and have descended in almost every obstetrical work of which we have any knowledge. Our object in writing this Essay is to aid in the correction of some of these errors.

The least appearance of opposition to the announced opinions of distinguished Medical men, and the practice of their numerous followers, may give rise to the charge of presumption. But encouragement is given in the outset of our present undertaking, by the reflection, that truth contains as much intrinsic value expressed by those trudging along the humbler walks of the profession, as when inculcated by the Professor in his chair, or transferred from page to page throughout a long line of standard publications.

It will be admitted by those who have had a full share of experience in the treatment of difficult labors, that a few absolute rules cannot be applied successfully to every case. Much is necessarily left to the judgment and tact of the practitioner. While, therefore, nothing will be found in this paper of an arbitrary character, there will be an independent attempt to correct errors, to lesson the perplexities of the accoucheur, to mitigate suffering, and to save life.

A ready and successful management of difficult labors pre-supposes an intimate knowledge of those which are natural. And if by natural labors are understood those which terminate spontaneously, and without involving necessarily the safety of either mother or child, shoulder presentations may be considered the true type of unnatural or difficult labors, for they almost always demand extrinsic aid.

The satisfactory termination of difficult labors depends upon the correct adaptation of art to the principles of science. Traction is a mechanical act, but to be successful in delivery, it must be made in conformity with scientific details, with due regard to the relation of organs and tissues. The convex surface of the fœtus is correlative with the concave surface of the uterus. If they were inanimate, rigid bodies, the relations of their several parts could not be much changed unless the curved lines of the one, were moved along the curved lines of the other. Their partial flexibility does not exempt them from the operation of the same principle.

The uterus undergoing gradual distention by the growth of the fœtus, and by increase in the quantity of liquor amnii, is not from this cause alone excited to an expulsion of its contents. Let a strong and sudden mechanical force be applied to the fibres of the uterus, even to a limited extent, and contraction will speedily follow. If any portion of the fœtus should be pushed forcibly against the fundus of the uterus, by attempts to rectify a malpresentation, a more than corresponding resistance would soon apprise us of a want of adroitness, and the probabilities of failure. The hand of the manipulator in the vagina, imparts a sense of fulness, and induces expulsive efforts on the part of the mother. Pressure on the internal face of the perineum, or along the recto-vaginal septum, urges the uterus to renewed or more energetic action. Simple contact of the uterine and fœtal surfaces in turning, does not produce undue contraction of the uterine walls. The presence of the hand, added to that of the fœtus, within the uterus, is a common cause of irritation and expulsive force. But the fact which we most desire to enforce here, is, that when the foetus, in the operation of turning, is moved in straight lines, and sensibly displaces the uterine fibres with which it comes in contact, it is speedily forced back to its original mal-position; nor can its displacement be easily rectified, except it be moved in conformity to the curvatures of the cavity in which it is contained.

Difficult labor, arising from the presence of either the right or left shoulder of the foetus, at the brim of the pelvis, is not common. Indeed, some prominent obstetricians know nothing of it from experience. He who refuses to examine its nature carefully, however, on this account, will find in the hour of trial, that he has been un true to himself, and that the lives of confiding and beloved ones, are in double peril. Difficult labors, in truth, cannot be successfully managed without a knowledge of their character, not to say the possession of tact derived from experience. Without the one, he cannot exercise the other. In natural, a want of knowledge would be more excusable than in unnatural cases. The former may terminate favorably, in the midst of *inactive* ignorance; the latter *require action,* guided by an enlightened judgment. A man may justly congratulate himself that he has never been entrusted with the management of a difficult case of labor, but he should not cherish the belief, on this account, that his next case will not require special interference. With the present knowledge of the profession, it is impossible to determine the nature of a presentation from external appearance, or from the feelings of the pregnant woman. And it is hardly to be presumed, that a physician will examine all his patients during the progress of gestation, with a view to ascertain the kind of presentation he is to meet; admitting, that in some cases, the position of the foetus may be ascertained by manipulation through the walls of the abdomen, and by vaginal touch. Hence, the importance of being prepared to treat every case that may occur, in the best possible manner.

It has been claimed, that nature is adequate to the accomplishment of her own wise designs, and that shoulder presentations may be left with safety to the spontaneous action of the uterus. None, among the controlling spirits of our profession, have enforced this doctrine more strongly than Denman. He contended that by the alternate contractions of the uterus, the shoulder was moved from its position, until the head or breach occupied its place and became the fixed presentation. It may be admitted, indeed, we know, that the shoulder has receded, and the breech has subsequently presented in one case, and the head in the other. Hence the language of Dr. Denman—"spontaneous evolution of the foetus"—may still be retained.

At a subsequent period, Dr. Douglass, of Dublin gave a different explanation of the manner in which spontaneous delivery was accomplished in shoulder presentation. The accurracy of his views have been acknowledged by more recent writers, who have had opportunities for observation.

Dr. Churchill says, "the head and the shoulder depressed in the pelvis, are fixed. and the remainder of the body doubled up, is inch by inch forced into the pelvis, and through the external parts, until all below the arm is expelled, leaving the case to terminate as a breech or foot presentation. At no part of the process is the arm at all retracted; but if moved at all, it is still further protruded; the name of "spontaneous expulsion," given by Dr.Douglass, is therefore more suitable than that of "spontaneous evolution." Still, the question is not, whether spontaneous delivery is accomplished in these cases by "evolution," or "expulsion," but whether the physician should stand idle, and hope for delivery by the long continued agonies of his patient.

By reading the following quotation, some faint idea may be formed of the intense and protracted suffering to which a woman is subject, during "spontaneous expulsion," at full term.

"Immediately after the rupture of the membranes, the parts diminish in size by the compression they undergo. The first period is the analogue of flexion in the presentation of the vertex, of extension in that of the face, and of the lessening of the parts in the presentation of the pelvic extremity. Then the shoulder descends gradually, and, in proportion as it enters the excavation, it executes a movement of rotation, which places the head on the horizontal branch of the left pubis, and thence under the pubic arcade. After this movement the arm disengages, and passes out of the vulva; sometimes the expulsion of the arm takes place before this period. When the rotation is performed, the period of the descent of the trunk is complete; the side of the fœtus is pushed into the excavation by gliding on the right sacro-iliac symphysis, while the shoulder remains immovable. After the side, the pelvic extremity descends, which also pursues the same direction. Finally, the perineum distends, and then successively pass out at the anterior commissure of the perineum, the lateral and superior portion of the chest, the side properly so called, the hip and pelvic extremity. In proportion as these parts are delivered, the head and left arm enter the excavation, but they are soon expelled, and, in most cases, the head does not undergo its movement of internal rotation. In a word, it presents at parts which have been excessively dilated, and it is not solicited by them to perform this movement of rotation. Such is the course pursued, when the dorsal surface of the fœtus corresponds to the surface of the pelvis."

Not only does a labor of this description require unparalleled voluntary efforts—not only does it involve extreme suffering of body and mind, but many patients have died before, or soon after delivery; and, alas, too many of those who may have survived, have found themselves entailed with incurable injury, or enfeebled general health.

This is not all. According to M. Velpeau, only twelve children were alive after "spontaneous expulsion," out of one hundred and thirty-seven labors.

It is almost certain from the statements of those in whose judgment we are bound to confide, that spontaneous expulsion cannot take place, even with the hazards already enumerated, except in cases where the fœtus is small, or the pelvis unusually capacious.

That a fœtus of full size may pass through the pelvis, the shoulder or side continuing as the presenting portion, without necessary injury to the mother, is proven by the painful details of the following case:

The patient was a young German woman, in labor for the first time. A shoulder presentation was detected at an early period by the midwife, first called in attendance, who, with uncommon prudence and forethought, suggested the necessity of an accoucheur more experienced and skillful than herself. A messenger was speedily despatched for a physician of their choice, who, soon after placing himself at the bedside of the patient, decided that the arm which had prolapsed was a leg. To expedite delivery, the arm was seized, and was made to sustain for a considerable time strong traction. Sufficient force, however, could not be applied by means of the naked hand to withdraw the child. A towel was interposed, and after repeated efforts and renewed energies, the arm, together with the clavicle and scapula, were torn from their attachments. This, to those present, was a new mode of proceeding, and not being exactly in accordance with their feelings or judgment, the doctor was requested to withdraw.

The physician next called, finding an unpromising state of affairs, invited us to share with him the responsibilities of the case. On our arrival at the house, we were informed that the fœtus had been expelled by spontaneous action. The midwife, who used her eyes as well as her hands, assured us, that one shoulder, and so much of the other as had been left, were born first and at the same time, and that the head and breech escaped also together. From an examination of the child, it seemed highly probable that the statements of the midwife were correct. As the pulling at the arm was increased, the shoulder descended more and more; and the neck of the child was stretched until the face reached the pelvis, and was compressed in the integuments between the crests of the ilia. There it remained imbedded, until our examination of it had been made. The child could not have weighed less than eight or nine pounds. The mother lived, and, as we understand, her convalescence was not protracted. We are informed by Dr. Dewees, that "spontaneous evolution" had never occurred in his practice, and yet, he says, "I should, therefore, recommend waiting for this 'spontaneous evolution,' whenever turning forbade the hope of saving the child, provided the labor be not complicated by either of the accidents enumerated."

To us, the lesson of Dewees is far from being satisfactory on this subject. Notice the language—"whenever turning forbade the hope of saving the child." Are we to allow the woman to suffer on and on, not because turning is difficult or impracticable, but because the child is dead? We cannot suppose this to have been the meaning of so distinguished a practitioner; for if it has become a settled doctrine, that the claims of the mother are paramount to those of the child, when both are alive, how much stronger are these claims when the latter is certainly dead.

Perhaps Dr. Dewees entertained, to their full extent, the views entertained by Denman, viz: that the shoulder receded from the brim of the pelvis, and that in time the head or breech assumed its place. Suppose he did believe in this change of position and presentation, it was simply a belief in a possibility. If a case had never occurred in the practice of a man of such unlimited experience, what just ground had he to hope that one would soon be presented? Would any other man be sustained in waiting thus, as a compliment to the doctrine of Denman? While we admit, with both these distinguished teachers, that "meddlesome midwifery is bad," we greatly fear that tardy action has been followed by a large amount of evil.

Diagnosis.—At an early period of labor, the signs of shoulder presentation are somewhat negative. The membranes may be felt within the os uteri, but even when relaxed and admitting considerable pressure, the finger can detect nothing beyond. By and by, the os undergoing gradual expansion, the membranes protrude into the vagina. Our suspicions of a mal-presentation are increased; for, instead of feeling a broad surface of membranes, and through them a large, round unresisting body, they are in the shape of a loose. elongated bag. At length the os tincæ is fully dilated, but the presentation is no less obscure. Up to the present period, however, all this may frequently be said of the breech presentations, and occasionally those of the head.

The contractions of the uterus occasion a descent of the presentation, until it it can be felt at the superior strait. Now the mind is led to ask and answer questions. Is this the vertex? No. It is not hard enough, it has not sufficient circumference, nor has it sutures nor fontanels. Is it the breech? No. There is something that feels like the tuberosity of the ischium; there is no fissure, there are no genital organs. Is it a foot? No. There are no short toes—no malleoli; there is no heel. It cannot be the hand, for it is without long fingers, and there is absence of wrist, or well defined palm. Is it not the face? If it is, there is neither chin, mouth, nose, eyes, forehead. We will not say anything about the elbow, for if that be near, the shoulder cannot be far off. It must be the shoulder. The shape and size would so indicate—extending the finger upwards, either towards the pubis or sacrum, the axilla may be felt; on one side the clavicle is detected, on the other, the scapula, and during the exploration, the ribs and intercostal spaces will assist in the diagnosis.

These several parts are indistinct, while the membranes remain unruptured. After their rupture, the presentation descends and is more readily made out. At this time, also, the arm may be moved, which will strengthen our opinion still more. When the arm falls into the vagina, as it may by sudden rupture of the membranes under uterine contraction, or during an examination, there should not be left upon the mind a single doubt. It is true, the arm has been mistaken for a leg, and great mischief has been the result, but a careful examination of the hand will prevent errors of judgment on this point.

Great care has been enjoined upon us in our examination, lest the arm should be made to descend into the vagina, and prove an obstacle to successful turning. We regard it so little in the way, and so much under our control, that we have not hesitated in a case of doubtful presentation, to draw it down from the superior strait, and use it as a means of more certain diagnosis.

Causes.—Any attempt at a solution of the cause of shoulder presentation, would result in a mere waste of time. At best, we could arrive at nothing but conjecture, and our object in writing this paper is to present our views in as practical a form as possible. We may venture in passing, however, a few suggestions.

Among the several conditions to which shoulder presentations have been attributed, are the small size of the fœtus, a large accumulation of amniotic fluid, uterine obliquities, pelvic obliquity, long continued agitation of the body, sudden shocks, violent mental emotion, partial contraction of the uterine fibres. Most of these so-called causes are daily witnessed, and yet how rare are shoulder presentations.

At this point, we are inclined to adopt the language of Cazeaux, which is: "If we might be permitted to hazard an opinion, after so many others, we should unhesitatingly say, they have erred by seeking only in the fœtus, its form and structure, for the causes of those various positions, exhibited by it in the internal cavity." To engage earnestly in an examination respecting the cause of position of the fœtus, we should deem it necessary to embrace both the uterus and its contents.

When the ovum enters the uterine cavity, it is liable to be moulded to the shape of the cavity, (speaking mechanically) rather than to expand the uterus. From this moment, (if not before) the prominent functions of the uterus, are those of growth and development; the fundus, and that portion of the body nearest to it, remaining, as in the unimpregnated state, larger than the neck and inferior portion of the body. This is not to be attributed to a natural tendency in the uterus to uniform expansion only, but to the fact that the placenta is in the upper portion of the cavity, and demands that the cavity should be here more expanded, than where its contents are less.

The embryo is, at the same time, becoming more and more developed. During the first few weeks it is suspended in the liquor amnii by means of the umbilical chord. At this period, the cephalic extremity being heavier than the pelvic, (however much we may agree with M. Dubois when the *fœtus* had become fully developed,) is most dependent, and until it reaches the bottom of the membranes, is subject the laws of gravity. Afterwards, the uterus will be found to have adapted itself, in all its diameters, to those of the *fœtus,* which the *embryo* has now become.

We see then, how the vertex becomes *naturally* the presentation, and it is easy to admit that Madame Boivin had 19,810 vertex, out of 20,517 presentations, that Madame Lachapelle observed the same 14,677 times in 15,652 cases, that Dr. Jos. Clarke had 10,387 cases, and out of this number 9,746 with the head in advance, and that Collin's record is correct in giving 15,912 head presentations, in 16,414 labors.

Vertex presentations, therefore, may be justly considered as in accordance with a general law, and all others as violations of this law, just as placenta previa is a departure from the physiological principle, that the placenta should be attached near the uterine extremity of the fallopian tube, and just as utero-gestation is sometimes earlier, sometimes later than the natural period of 280 days.

In shoulder, and in breech presentations, the transverse is often so much longer than the vertical diameter of the uterus, that it is visible, and gives rise to the exclamation, in respect to the woman, what a singular and ugly shape she has! May not shoulder presentations be owing to an early and too rapid expansion of the neck of the uterus, giving to the foetus much room for motion, and subjecting it to influences, which in more natural cases, would have no effect in changing its position?

In considering shoulder presentations, even to a limited extent, several questions very naturally arise.

1. In what manner can a change of presentation be accomplished most easily and successfully?

2. What mode of proceeding will prove most favorable for the mother?

3. How may the life of the child be best preserved?

4. Can any mode of delivery be relied on exclusively?

Two modes of delivery, besides those to which we have already alluded, have been described by obstetrical writers, viz: *podalic version,* or turning by the feet, and *cephalic version,* or turning by the head. Strictly speaking, however, cephalic *version* is not performed, i. e. if *version* and *turning* be considered as they generally are, synonymous terms. When to expedite labor, we substitute the head for the shoulder, we simply remove one part, that the other may occupy its place. And we should not allow the sudden impression of a name, to direct our minds into an improper course of proceeding, or we may say, into an attempt to accomplish that which is impossible. Podalic version, on the contrary, is not only a change of the presenting part, for the feet, but the actual turning of the head, most of an entire circle.

We shall endeavor to answer these questions in the order presented. The first question embraces the general principles of turning, and may be considered the foundation of the whole subject before us. It would afford us much pleasure and cause for exultation, if we could refer to American authorities for full and correct views upon turning, connected with shoulder presentations. For a moment, however, we must bring them before us.

In "Dewees' Midwifery" we find no instructions upon the management of shoulder presentation by cephalic version.

After giving a short quotation from one of the early authors, Prof. Meigs remarks: "It may be that those old practitioners of the days of Queen Elizabeth may have sometimes succeeded by pushing up the presenting shoulder, in getting the head at last to come to the strait again, but such an event appears to me in any case most improbable."

Professor Huston, in a note, to be found in "Churchill's System of Midwifery," says: "The practitioner will experience great difficulty, and most likely fail in attempting to bring down the head in a favorable position when the shoulder presents. I am satisfied from considerable experience that when the arm, shoulder, breast, back or side is the presenting part, it is better to bring down the feet at once, while the condition of the uterus is favorable for turning than to waste time in attempting to restore the head."

Professor Bedford, who had been induced to translate and edit "Dr. Chailly's Treatise on Midwifery," is silent upon the subject of cephalic version in shoulder presentations.

Professor Miller uses the following language: "Cephalic version has but few advocates at the present day, and is confessedly applicable to such a limited number of cases that it is scarcely worthy of our formal consideration. For this reason, and because I have no experience of it, I shall confine my observations to pelvic version. Again, it is manifest that all attempts forcibly to pass the hand between a powerfully contracted uterus, and the foetus, must be extremely painful and may cause fatal rupture of the organ. The only resort is mutilation of the child, either by eviscerating its trunk, to enable the operator to extract it doubled upon itself, in imitation of the natural process of duplication, or by decapitating it in order that the body and head may be separately extracted."

We hope to satisfy those who may follow us to the end of our paper, that evisceration is not the sad alternative to which we must resort in those cases in which podalic version is impracticable. Some attention, however, must be given to those European authors, whose opinions and teachings are now before us.

To facilitate turning by the feet, Dr. Churchill recommends the use of the lancet, tart. antimony, and opium. He then adds, "should these measures fail, and version be impracticable, we must open the chest of the child, and eviscerate, after which it may be extracted by the crotchet."

Three modes of turning are given by Dr. Ramsbotham, viz: by the feet, the breech and the head. In transverse presentations, he claims "of these three modes, that of raising the shoulder and bringing down the head would be the safest for the child, because there would then be little chance of pressure on the funis umbilicalis, and it is that pressure which usually destroys the foetus, when extracted by the breech or the feet, but although safest for the child, it is the most dangerous to the mother, as well as most difficult to the operator, and the danger, as might be expected, is in proportion to the difficulty." "And in these attempts," speaking of the several steps in turning, "which will most likely require to be repeated, both the *uterus* and *vagina* would be seriously endangered."

If Ramsbotham expressed these views from experience, his manipulations must have been singularly defective. How a change of presentation from the shoulder to the head, accomplished as it can be, by a force scarcely appreciated by the patient, is to endanger both the uterus and vagina, is to my mind past comprehension.

The opinions of Velpeau are expressed in these words: "Cephalic version may therefore be attempted. 1st. In a well-formed pelvis, where no other accident has happened except a vicious position of the foetus, and the head is found in an inclined position in the vicinity of the strait. 2d. In presentations of the shoulder, back or anterior part of the thorax, *provided the arm is not prolapsed,* and the uterus not too much contracted. Lastly, it seems prudent to try it whenever the feet are further removed from the strait than the head is, and where it is probable the labor would terminate spontaneously if the head were at the strait." These views refer to the method adopted by the early obstetrical writers, of performing cephalic version by manipulations, in part, through the walls of the abdomen.

Speaking of the same kind of cephalic verson, Chailly admits "that the delivery will be as happy for the infant and mother as if the vertex had originally presented." "After the rupture of the membranes," he continues, "we must not think of *cephalic version;* pelvic version is the only resource." Again, "after the rupture of the membranes, this operation should be resorted to only *when the pelvis is deformed.*"

A few words in passing as a commentary on the above paragraph. If a change of presentation is safer for mother and child before the membranes are ruptured, why not afterwards? provided undue violence be not employed in effecting the changes. *Violence* would be as likely to destroy the child, as well in podalic as in cephalic version. And if the latter can be performed easily and advantageously when the pelvis is contracted, how can we reason against it, when no obstacle interposes to the ready use of the hand in changing the presenting portion of the foetus?

We have thus given a hasty outline of the views entertained by a few obstetrical writers on the subject of turning in shoulder presentation. How far our own experience, which will now be given, is in accordance with the above, others are at liberty to determine.

Some years since, we had under our care, at different periods, two cases of shoulder presentation. In one of these cases, the membranes gave way under the action of the uterus, before the os-tincae was fully dilated. As the liquor amnii escaped, the shoulder descended so as to be easily felt. Being in the country, and too far to obtain medical advice within a safe period, we determined upon speedy delivery by the feet. The os tincae soon became sufficiently dilated to admit the necessary manipulations, and while passing my hand above the superior strait, the shoulder moved upwards, as if to change its location. A young man, with little experience in turning, but with sufficient knowledge of its difficulties to occasion a dread of its necessity, can appreciate the feelings of the moment, and how willingly the suggestions of nature were adopted. The movements of the foetus were facilitated, by acting first upon the shoulder, then upon the head; and after the latter had been properly adjusted, and had become fairly engaged in the superior strait, the labor progressed and terminated favorably without further interference.

In the second case, the os-uteri became gradually expanded to its full size, with the membranes uninjured. Pressure upon them with a view to reach the obscure presentation, and a strong contraction of the uterus at the moment, occasioned their rupture. Speedily the shoulder came to the superior strait, and being easily moved as in the above case, was similarly managed.

In both these cases cephalic version was more expeditiously performed, than in the most favorable cases of turning by the feet, that had fallen under our notice. Recently a case occurred in our own practice, but as it resembles so closely the above, it is not deemed necessary to enter into particulars. Cases reported by others, will doubtless be received as more conclusive testimony.

In the February No. of the Western Lancet, 1851, Dr. B. F. Richardson reports as follows:

"I was called to see Mrs. S— at 8 o'clock A. M., July 9, 1850, aged 25 years, medium height, robust and compactly built. Upon inquiry of the midwife, (who had been in attendance from an early hour in the night previous) I ascertained that she had been in hard labor during the night, and that the membranes had ruptured seven hours prior to my arrival. Her pains being very strong, with brief intervals, I at once resorted to an examination. I found the right arm in the vagina, with the palm of the hand presenting towards the inner side of the left thigh of the mother. In the upper portion of the vagina were several folds of the funis, in which I detected strong and distinct pulsations. After having remained with the patient about a half an hour, observing during each pain, whether the child advanced or changed position, (neither of which occurred) I determined on an exploration, in order to determine the practicability of bringing down the feet. After placing the patient in a convenient position, I slowly passed my right hand into the uterus. As soon as my hand reached the axilla of the child, it encountered considerable constriction from the uterus. After exploring for the neck and head, I directed my hand in search of the feet—passing it up, with the palm applied to the right side of the child, until it reached the ilium; beyond this point my hand would not pass, with the degree of force employed, which was sufficiently great to be compatible with safety and advantage. The uterus had firmly and persistently contracted around the pelvis, and over the crest of the ilium. I retained my hand for some time in its position, hoping to be able to insinuate my fingers beyond this point of constriction, and gain the feet, but was compelled to desist and withdraw my hand, and give over the attempt. My exploration discovered the position of the child to be as follows: its right side presented toward the left iliac fossa—inclining somewhat towards the sacrum. The right side of its neck was projected against the pubic arch, near its junction with the right ilium, the head occupying the right iliac fossa anteriorly. In this position it seemed to be firmly and persistently maintained. The impossibility of the expulsion of the child (it being evidently above the medium size,) without decided manual interference, the great risk to the mother from an attempt to turn, so long after the rupture of the membranes, with the firm and consistent constriction of the uterus about the child, induced me at once to propose the advice and co-operation of another Physician. By agreement, Prof. M. B. Wright was sent for, it then being between 9 and 10 o'clock. Expecting some delay, (on account of the numerous engagements of Physicians generally at that time,) I left the patient for the purpose of visiting some cases of cholera; with the understanding that word should be left at my residence, when it would suit Dr. Wright's earliest convenience to meet me in the case. Unexpectedly to me, the attendance of Dr. Wright was secured immediately—a contingency provided for, however, by my request, that should he return with the messenger, and before my return, to accompany my partner, Dr. Morgan, and do in the case as they thought best for the safety of the parties concerned. Being absent about one hour and a half attending to prior professional engagements, I returned by the house of the patient, and was informed that Drs. Wright and Morgan had been there about half an hour before, and that Dr. Wright had interposed in the case, being in too great haste to await the uncertain period of my return. I at once made an examination, and found the arm returned and the vertex presenting. The funis was prolapsed, but without pulsation. Observing the progress of the head during three or four pains, I found it disposed to descend, and only delayed by the resistance of the parietal protuberances. I then ordered *secale cornutum* in twenty-five grain doses every twenty minutes (as she seemed very much exhausted, and the pains inefficient) of which she took two portions. The pains became more energetic, and in about one hour from the time of taking the first dose, the child was expelled—lifeless. I judged its weight to be about nine or nine and a half pounds. A careful external examination gave no clue to the probable cause of death. It had been dead but a short time prior to delivery. Mrs. S— had a rapid and uninterrupted convalescence.

Dr. Wright's mode of manipulation in the case, was as follows: The patient being on her back, across the bed (in the usual position for turning) he introduced his right hand, passed a couple of loops of the prolapsed funis around the child's arm, and then returned it —converting it into a shoulder presentation. He then grasped the shoulder and thorax, and pushed the body of the child upwards and to the left side, in consequence of which the head was brought near the axis of the pelvis. He then relinquished his hold of the body, and grasped the occiput—bringing it down so as to enable the head to engage.

The succeeding number of the same journal contains a case of shoulder presentation, reported by Dr. Terry. After giving an account of the first labor of his patient, and of the difficulties encountered in consequence of the small size of the pelvis, the doctor proceeds: "On the evening of October 25th, 1850, about 9 o'clock, I was requested to see the above patient, being one year, three months and eight days from the time of her previous delivery, to attend her in her second accouchment. I learned that she had been afflicted with erratic pains for the last twenty-four hours, which at times were quite intense. I found her in bed, lying on her back, the position she felt most disposed to retain, it affording her most rest, and enabling her to endure her pains the better. I made an examination in the position I found her. The os tincæ was dilated about two inches in diameter, readily yielding to pressure. The amniotic fluid was escaping in moderate quantities, showing evidently the rupture of the membranes. I was convinced at once it was not a normal presentation. After waiting three or four hours, the pains became more intense, I made another investigation, and found a shoulder presentation. I now made up my mind that turning must be resorted to—the sooner the better. At this time she had full pulse, flushed face, and spasmodic contraction in the body of the uterus. I resorted to bleeding, when the intensity of the pains ceased. After waiting a short time, I proceeded to the process of turning. I gradually and easily passed my right hand into the uterus, and with little difficulty found the right foot, and brought it down so that the toes were near the vulva. At this point I found a resistance to any further progress in that way. I then made search for the other foot, but did not find it. During this effort, the right hand of the fœtus came down, and on with drawing my hand, the funis prolapsed. I now attached a strong fillet to the ankle, after which I passed my left hand into the uterus. I attempted to raise the child up from its present position, but failed, the head lying in the right iliac fossa. At this time the pains had ceased, except when roused by external force. The patient, myself, and attendants were much exhausted, from the severe labor and time devoted to effect delivery. After an interval of a few hours, I obtained the able assistance of Professor M. B. Wright. On our arrival the pains had returned, but they were not severe. Upon an examination he found the fœtus presenting with the right hand, leg and funis in the cavity of the pelvis, as before described. He attempted to turn by elevating the shoulder and making traction upon the leg, which he found already down. Failing in this, he endeavored to introduce his hand into the uterus with a view to obtain control of both feet, but the uterus had contracted so thoroughly upon the child as to render it impracticable. The doctor then decided upon a resort to version by the head. The leg, arm, and funis, were successively returned into the cavity of the uterus, and the vertex was brought into the superior strait, with the posterior fontanelle behind the left acetabulum. The patient had been previously put under the influence of chloroform. Uterine contractions having ceased, it was deemed advisable to use the forceps, which were adjusted before the hand of the operator had been withdrawn from the pelvis. It was soon found, however, that the instrument could not overcome another prominent obstacle to delivery, viz., a disproportion between the head of the fœtus and the brim of the pelvis. The perforator was then used, the forceps still retaining their hold. As soon as the cranium was lessend in size sufficient to pass the superior strait, it was brought forward, and delivery was accomplished by means of the forceps."

In the May number of the Western Lancet, 1851, a case is thus given by Dr. J. P. Walker:

"I was called Saturday noon, April 12, 1850, to see Mrs. L——, aged 30, in labor with her third child. The membranes had been ruptured on Friday morning, nearly thirty-six hours previous to the time I was called.

"I found her with severe pains, but on examination could not reach the os uteri. At eight in the evening, I could with difficulty reach the presenting portion. The meconium had been passing freely, and I had been led to expect a breech presentation, but upon close examination I found that the shoulder presented. I sent at once for the assistance of Professor M. B. Wright, who arrived at eleven o'clock Saturday evening."

At this time the arm was suspended from near the center of the superior strait, the fore-arm being partially flexed, and looking towards the left. Dr. Wright proposed *cephalic version*, as an easy and successful mode of treating the case, which was acceded to. The fore-arm, which could be moved easily by the finger, was extended, and the hand escaped through the os externum, with the back of it anteriorly, and the thumb directed to the right thigh. The arm was brought down with a view to a more satisfactory diagnosis, and to indicate the proper manipulations for delivery. The presentation, and the hand to be used in changing it, being determined, the Dr. proceeded to the accomplishment of his object. The patient was placed, as in the ordinary way of turning by the feet. The arm which was now in the vagina, was returned so as to ascertain the relative position of the head. It was on the right side of the pelvis, the occiput in front, the face resting on the posterior surface of the right iliac fossa, and the right cheek against the promontory of the sacrum. The position of the fœtus being thus accurately ascertained, *cephalic version* was commenced.

The body of the fœtus was moved laterally and upwards, by slight force applied to the presenting shoulder, until the breech had ascended to the fundus of the uterus. The face, by this movement, was made the presenting portion. It was readily changed for the vertex, but this change could not be secured without the constant application of the finger to the occiput. This was not deemed advisable, as the expulsive efforts had not yet commenced, and the os tincæ was not more than two-thirds dilated. At half-past ten o'clock A. M., eight hours subsequently, the second stage of labor commenced, and when the next examination by touch was made, the face had again presented, and had partially engaged in the superior strait—the chin being directed anteriorly, and to the left. It was deemed best not to effect any change, either in presentation or position. As the face, however, passed through the superior strait, the chin inclined more and more backwards, until it was placed before the left sacro-iliac symphisis. Before reaching the inferior strait, the chin had again rotated forwards, without extrinsic aid, and finally it emerged under the arch of the pubis. Labor was then speedily terminated, the second or expulsive stage occupying about two hours and a half. The fœtus was dead, and offensive from partial decomposition. It weighed about nine pounds.

The patient has been doing well since. This case is not only instructive as to the proper treatment of such cases, but also for the remarkable efforts of nature to assist in delivery."

Now after all this, are we not justified in declaring,

1. That at an early period in labor, and especially if called before the uterus has been deprived of its liquid contents, a shoulder may be converted into a vertex presentation more easily than turning by the feet is ordinarily performed.

2. That although the membranes may have been long ruptured, turning by the head can be accomplished with great facility.

3. That delivery by *cephalic version* may be speedily effected, after repeated and ineffectual attempts have been made to turn by the feet.

4. That *cephalic version* should receive a prominent, nay, leading place, as a means of expediting delivery in shoulder presentations.

The second of the questions already proposed, is, what mode of proceeding will prove most favorable for the mother?

In his chapter on podalic version, Churchill observes: "On the other hand its *disadvantages* are not to be overlooked. From the distance the head has to traverse, and the difficulty of seizing the feet, and of turning the child in utero, there must ever be a fearful risk of injury to the mother."

Upon an examination of the tabular views given by Lee, we find that out of seventy-one cases of shoulder presentations, in which turning by the feet was resorted to, "seven women died from rupture, and three from inflammation of the uterus." "Laceration and inflammation of the uterus are, therefore, the consequences chiefly to be dreaded. Four of these cases of rupture occurred in the practice of other accoucheurs, and three in patients under my own care, and where no great difficulty was experienced or force employed in turning."

In *cephalic version* the hand does not enter the cavity of the uterus, and, consequently, neither its walls, nor any portion of them, are forcibly pushed out. The fœtus is moved comparatively little within the uterus, the head being already near the superior strait; while in *podalic* version, the part to be first delivered, is most remote from the canal through which it must pass. In the former, the injury to the mother cannot result without great awkwardness on the part of the obstetrician, while in the other we have reason to feel surprised at the escape of injury. In turning by the feet the hand must necessarily be moved considerably within the uterus, and often while it is contracting violently. In turning by the head there is but little, if any, direct contact of the hand within the uterus. In the one case, contusion of the uterus by the hand is to be expected —in the other case there is no injury, because there is no contact. Turning by the feet may occasion a severe nervous shock. Not so in changing the shoulder for the head.

How may the life of the child be best preserved? is the third enquiry to be briefly answered.

In describing the disadvantages of turning by the feet in all cases, Churchill says: "The mortality amongst the infants thus brought into the world is very great. As far as our statistics extend, they yield 174, out of 518 delivered, or 1 in 3."

The mortality in shoulder presentations is, doubtless, greater than this. In the first place the position of the fœtus weakens its hold upon life. In the second place the hand is more difficult of introduction into the uterus in shoulder than in head presentations, and whatever force is required is sensibly felt by the fœtus, and upon that part of the body where pressure is made with least impunity.

A timely resort to *cephalic* version gives the fœtus almost as much certainty of life as if the presentation had been originally of the head. Why not? The manœuver amounts to but little more than in rectification of deviated head positions.

We are informed by Churchill that, "Bush gave an account in 1826, of fifteen cases, in which *fourteen* were born living. In 1827, Ritgen collected forty-five successful cases. Riecke has had sixteen cases." In all the cases treated by myself from the beginning, the children were born alive. The liability to compression of the chord and consequent death of the fœtus, is in proportion to the length of the labor, or rather to the descent of the fœtus in the cavity of the pelvis. Hence to be wholly successful, cephalic version should be performed a short time before, or soon after the commencement of the second stage of labor.

Can any mode of treating shoulder presentations be relied on exclusively? The answer must be in the negative. We are disposed to adopt the language of Cazeaux, "that at the present day it would be improper to embrace either opinion exclusively, for some cases are better suited to the cephalic version, while there are others, on the contrary, where the pelvic one is alone practicable; consequently both operations should be retained in practice, leaving the judgment of the acccoucheur to determine the cases, where the one or the other ought to be preferred." And we will conclude this part of the subject by stating a few of the circumstances under which the different modes of turning may be adopted.

Turning by the feet is to be preferred in cases of inefficient uterine action, or exhaustion from long continuance of labor; in hemorrhage, convulsions, or in any case where there may be a demand for a speedy delivery.

Turning by the head should be selected in all cases where difficulty arises from mal-position merely; or in convulsions, hemorrhage, or prolapsus of the funis, if the uterus should be engaged in vigorous expulsive efforts. In rupture of the uterus our great reliance is in artificial delivery; and the question naturally suggested would be, which will guaranty the greatest safety, podalic version, or cephalic version aided by the forceps? And we would be guided in our action by the answer we gave to the question.

Which shoulder presents? The diagnosis of shoulder presentations has been already given, but it is still important to ascertain which shoulder demands our attention, and the relations the fœtus sustains to the pelvis and uterus. Either shoulder may occupy the brim of the pelvis, with the back in one case looking in front of the mother, while in the other case it may be directed towards her spine. The head may be in the right, and again the left iliac fossa, the breech occcupying the opposite fossa, and the feet being high in the uterine cavity. But how are we to ascertain the actual and relative situation of all these parts?

It has been stated that the first vertex presentation (the occiput being behind the left ascetabulum) is more frequent than all the others. If we admit that shoulder presentations are deviations from those of the vertex, it would be fair to *infer* that we were about to adjust the right shoulder with the back in front, and the head on the left of the pelvis. The direction of the axilla would indicate the opposite direction of the head, so also of the elbows. Perhaps the top of the shoulder, the neck, and even the head may be felt.

The direction of the back may be known by the scapula and vertebræ, and by the fore arm lying upon the breast. If the coccyx, anus and iliac crests can be touched, the location of the pelvis is rendered certain.

The hand of the fœtus being in the vagina, can be used with advantage to ascertain which shoulder presents. If the palmar surface be directed upwards towards the symphisis pubis, and the thumb turns to the right side of the pelvis, we at once pronounce the right hand, and, consequently, the right shoulder as presenting. The reverse obtains with the left shoulder. Again, when the back of the hand appears in front, and the thumb is nearest the left thigh, the arm not being twisted, we should prepare to act upon the right shoulder, the back in front and the head in the left iliac fossa.

The back of the hand in front, with the thumb near the right thigh, indicates the presence of the left shoulder, the spine being in front, and the head on the right side of the pelvis.

So little do we consider the presence of the arm in the vagina as an obstacle to turning, we do not hesitate to bring it down, to aid us in our diagnosis if at all doubtful.

In this country, turning is performed, the patient being on her back. In cephalic version, we have always selected this position. The hand can be more readily introduced into the uterus, and the feet reached, however, with the patient on her elbows and knees, than when on the back or sides. There may be cases in which advantage would be gained, by placing the patient in this position, preparatory to cephalic version. This is suggested, however, on the experience of only one case, which may be briefly stated.

We were called to a patient in labor, with shoulder presentation, when we learned from the medical attendants present that the arm had descended into the vagina, full sixty hours previously. From three to five respectable physicians had been lending their aid, each, in turn, making ineffectual efforts to bring down the feet. With the patient on her back, we endeavored to pass our hand above the brim of the pelvis, but failed in this. The arm was swollen to an immense size, and, as it was much in the way, it was amputated at the shoulder, the child of course being dead. Still, the hand could not be extended above the superior strait. The woman, greatly exhausted, was placed and supported on her elbows and knees by assistants. With some difficulty, the uterus was then explored, the feet grasped, and delivery accomplished. When our hand came in contact with the presenting portion of the fœtus, however, we acted upon it as if to perform the cephalic version, and were satisfied of our ability thus to change the presentation. But, as labor had continued such a long time—as uterine action had, in a great measure, ceased—and as every moment of delay threatened an increase of great danger to the woman, a preference was given to podalic version.

The hand to be used.—The relations of the fœtus to the pelvis having been ascertained, and the patient placed in a proper position for turning, the next question is, which hand shall be introduced into the vagina? We answer, the hand, the palm of which is directed naturally towards the breech of the fœtus. It will be seen at once, that if the fœtus is to be moved in the direction of the breech, and in correspondence with the right side of the mother, and the left side of the operator, the right hand could be used with most success. In cases in which the head occupies the right iliac fossa, a choice could be given to the left hand.

The prolapsed arm.—It is generally conceded that, in turning by the feet, it is not necessary, nor would it be advantageous, to return above the brim of the pelvis, the arm, which may have fallen, or been brought into the vagina. In turning by the head, on the contrary, its reposition admits of no doubt; it is imperatively demanded. It is not demanded in consequence of any difficulty in moving the shoulder by its presence, but in the adjustment of the head at the superior strait, and its subsequent descent through the pelvis. By bending the fore arm of the fœtus until the hand is directed to the upper portion of the vagina, and then pushing up the arm, the entire member will soon ascend above the brim of the pelvis, and be no longer an obstacle to complete version.

The manner of performing cephalic version.—The attention of the profession is not now directed to *cephalic version* as a new subject. It was recommended by Hippocrates, and from his days to those of Pare, was attempted in all cases in which the head did not originally present. Presentations of the breech and feet, were not associated with natural labors until a comparatively recent period.

The practice and influence of Pare led to the adoption of *podalic* version, and it has continued the reigning fashion up to the present time. Instead of changing the feet for the head, in all cases where the former presented, as recommended by Hippocrates, it is now deemed proper, following the example of Pare, to substitute the feet for the head, in many cases of difficult labor.

The spirit of progress, however, has not been idle, although it has been slow in making proselytes. Opposing doctrines have been carefully scrutinized, to a certain extent harmonized, and adapted to individual cases. Flamand, professor at Strasburg, recalled the attention of the profession to the utility of cephalic version, and exerted his influence, by argument and illustration, to have it reinstated. Some of the German and French writers have been induced to assign cephalic version a place among obstetric operations; but they consider it applicable to such a small number of cases, that they have bestowed upon it little attention, and have attached to it but a small share of practical importance.

Although American minds are ever on the alert, and ready to test the value of suggestions from a practical source, they have not directed special attention to the subject before us. Indeed, the investigation of it has been prevented, by the expressed opposition of our writers and teachers on the one hand, and their silence on the other. And here I may be allowed to advance an opinion, which was openly entertained when a teacher myself, that the mass of the profession think and act too little for themselves. They too often embrace the doctrine of the teacher as true, to the rejection of their own experience. We would say to the lecturer, independence rather than place—be a martyr for truth, rather than be false to your profession to appease local jealousy. And we would urge, that while the practitioner awards honor where it is due, he should be true to himself, by thinking and acting for himself.

A few paragraphs from Cazeaux will express the opinions generally entertained upon cephalic version by European writers:

"Flamand was also in favor of the performance of cephalic version, even after the rupture of the membranes and the discharge of the amniotic liquid. He has even gone so far as to point out the particular manœuver for each one of the distinct presentations admitted by him, for the child's anterior, posterior, and lateral planes; but we deem it useless to enter into those long details, more especially since they may all be comprised in this: to grasp the presenting part, push it up above the strait, and then carry it as far as possible towards the side opposite to where the head is found, and afterwards get hold of the latter and bring it down, if the efforts made by the other hand through the abdominal walls, have not proved sufficient to make it descend into the excavation."

"Flamand himself acknowledges that this operation seldom succeeds, excepting when some region of the neck or upper part of the thorax presents at the strait. As for ourselves, we believe it would be difficult, even under such circumstances; however, it is barely possible, especially if there is still some water in the uterus, and the contractions are not very energetic."

"When a trunk presentation is complicated by the descent of an arm, the cephalic version, recommended by Ruffius, Rhodion, and others, should, in my estimation, be wholly rejected."

If we were to be restricted in our manœuvers by the advice given in some late obstetrical works, we should certainly fail in our object, and sooner or later we should be convinced that lessons given in the absence of experience are liable to errors, even in the outlines. Churchill tells us that, "if our object be to change the presentation—for example, to substitute the head for a shoulder, we must gently push up the shoulder, and then seizing the head, bring it down to the brim, and place it in the most favorable relation to the pelvis."

A professor representing the difficulties, nay, impossibilities, of performing cephalic version in shoulder presentations, places the leather baby in the manikin, raises the shoulder in a line corresponding with the axis of the pelvis, and with an air of triumph asks, "now, if I withdraw my pressure, or if the uterus should contract, will not the shoulder return to its original position?"

In reply to the above, let us merely observe, that the expressions "*raising the shoulder,*" and "*grasping the head,*" convey a very imperfect idea of the manœuver constituting cephalic version. And, to shorten discussion, we will present our own mode of proceeding.

Suppose the patient to have been placed upon her back, across the bed, and with her hips near its edge—the presentation to be the right shoulder, with the head in the left iliac fossa—the right hand to have been introduced into the vagina, and the arm, if prolapsed, having been placed, as near as may be, in its original position across the breast. We now apply our fingers on the top of the shoulder, and our thumb in the opposite axilla, or on such part as will give us command of the chest, and enable us to apply a degree of lateral force. Our left hand is also applied to the abdomen of the patient, over the breech of the fœtus. Lateral pressure is made upon the shoulders, in such a way as to give the body of the fœtus a curvilinear movement. At the same time, the left hand, applied as above, makes pressure so as to dislodge the breech, as it were, and move it towards the centre of the uterine cavity. The body is thus made to assume its original bent position, the points of contact with the uterus are loosened, and perhaps diminished, and the force of adhesion is in a good degree overcome. Without any direct action upon the head, it gradually approaches the superior strait, falls into the opening, and will, in all probability, adjust itself, as a favorable vertex presentation. If not, the head may be acted upon as in deviated positions of the vertex, or it may be grasped, brought into the strait, and placed in correspondence with one of the oblique diameters.

It will be observed, that we do not act upon the shoulders by raising them. Perhaps a slight elevation would facilitate the movement already described—or it might be better to depress them—and, again by lateral pressure, without either elevation or depression, our object might be accomplished. *Pushing up the shoulders,* therefore, does not constitute a prominent part of turning, if by pushing up is meant the mere raising of the shoulders above the brim of the pelvis.

As the body of the fœtus makes its curved movement under the hand of the operator, it advances upward, as well as laterally, by a combined, rather than a single action, which would give it only one direction.

The back of the hand, with which we have been acting upon the shoulder, is toward the head of the fœtus—consequently, its hold upon the head would be apparently slight—yet, after the shoulders have reached the iliac fossa, the vertex may fall upon the palm of the hand in occupying the strait, and its adjustment become easy. If, however, there should seem to be a necessity for grasping the occiput, there could be no reasonable objection to a speedy change of hands.

The entire process of cephalic version is to be adopted in the absence of uterine contraction; or rather, during intervals of expulsive force. And, as it is now a vertex presentation, we must be governed, as to time and manner of delivery, by those general rules applicable to such cases.

In all our cases, except the one which terminated as a face presentation, the occiput assumed a position corresponding with the first or second presentations of the vertex. In this case the occiput was before one of the sacro-iliac symphises, and to this fact we have attributed the tendency of the occiput to slide above the brim of the pelvis, and the difficulty in keeping it in place. If there had been the usual degree of uterine contraction, however, the head would, in all probability, have become fixed, and the presentation would have continued as one of the vertex, instead of changing for the face.

It will be seen that we lay no claim to the introduction of cephalic version as a mode of treating wrong presentations, and expediting delivery. A very brief examination of the subject, however, may induce some to award to us originality in respect to the means by which a successful change of presentation may be accomplished.

That cephalic version, by external manipulation—by acting upon the fœtus through the parietes of the abdomen and uterus—should have few advocates is not surprising. To be successful, it confessedly requires a combination of favorable circumstances not often presented. The tissues both of the abdomen and uterus, must be thin and yielding—the liquor amnii must have been retained, and in considerable quantity—and the fœtus must be proportionably small.

In all the obstetrical works we have examined, in which cephalic version is recommended by internal manœuvre, it is directed to *raise* the shoulder as the first necessary impression upon the fœtus. Viewed anotomically or mechanically, men have not been persuaded into the belief, that raising the shoulder can facilitate the permanent descent of the head into the superior strait. They claim, what is apparent to the eye in viewing a proper engraving, and as it can be demonstrated with the manikin, that the elevation of the shoulder at the brim of the pelvis, tends to increase the long diameter of the fœtus, and the transverse diameter of the uterus, and without any favorable adjustment of the head after pressure upon the shoulder has been withdrawn.

Suppose we follow out the directions given by some, and after the elevation of the shoulder, attempt to force the body of the fœtus in a lateral direction, will not the breech infringe against the walls of the uterus transversely ? To enable the head to engage in the superior strait, the body must be entirely removed from it, and this can only be done by raising the breech towards the fundus of the uterus. Raising the shoulder, therefore, is very naturally considered a means to prevent cephalic version. And we are not surprised that podalic version is almost universally adopted in the treatment of shoulder presentations.

If our mode of performing cephalic version is sufficiently clear, in the description already given, it will readily be distinguished from others. We claim for it great importance, on the ground that it is easily executed—that the mother and fœtus receive no injury—that there is little or no danger of subsequent displacement after the vertex has been fully adjusted—that, although it is most successful in recent cases, delivery may be accomplished after the membranes have been long ruptured—that it may be executed, after ineffectual efforts to bring down the feet.

Possibly our time might have been more profitably employed than in writing these pages. If, however, we shall have directed the minds of our brethren into a new train of observations, and aided in giving a true value to cephalic version—and, especially, if life shall thereby be preserved—we shall consider that an ample reward has been bestowed on our labor.

Art. II.—*Report of the Committee of the State Medical Society on Medical Ethics.* By John Dawson, M. D., Chairman.

The appointment of Standing Committees is one of the duties annually performed by our Society. But the necessity or propriety of each one of the Committees making reports, of course, depends upon a number of circumstances. That some should do so is absolutely indispensable; the members of others may find it impossible to collect the proper material; and others, where material is in abundance, may, perhaps, think that it may not conduce to the interests of the Profession to give it publicity.

To the class last mentioned, we presume belongs the Committee on *Medical Ethics.* This Committee, as its name imports, has imposed upon it the obligation of making known to the Society the moral standing of the Profession throughout the State. A work implying a knowledge so comprehensive and delicate, is very difficult to perform, and, of course, what is said, should be received with due allowance.

Morality in the Medical Profession is not a matter of spontaneous growth, any more than it is in any other department of Society. The impulses of the human heart, when unrestrained, do not always give rise to actions that are unexceptionable, and calculated to promote social life. Impressed with the truth of such views, our fathers in the Medical Profession commenced very early to criticise the conduct of each other, and lay down certain rules to which all exercising the duties of a Physician should be subjected. From time to time these rules have suffered the changes, and received the additions which, in the estimation of the good, and those having the most enlarged experience they required. At the hands of the American Medical Association they have lately been again revised, and may now be regarded as being as perfect as any that can be prepared.

It constitutes no part of our present scope to enter minutely into a consideration of the relation of the profession of Ohio to these rules as we find them fixed up in our Code of Ethics. A few, and only a very few of them most essential to the integrity and success of our calling will be noticed. From among these we select the following, coming under the title of "*Duties for the support of Professional character.*"

"Every individual on entering the Profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members—should avoid all contumelious and sarcastic remarks relative to the Faculty as a body, and while by unwearied diligence he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have by their labors brought it to the elevated condition in which he finds it."

A doctrine clearly set forth in this section, is, that the Profession of Medicine has a *character* which is the property, not of a single member, or of the members of any particular region, but of the Faculty of the whole country. This character is the result of the labors of the upright in heart and the self-sacrificing for centuries; and, as a consequence, it is no wonder that there are many to be found who venerate it, and exert their best abilities to maintain its dignity and honor.

The introduction of an individual into the Medical Profession consists in nothing more nor less than the clothing of him with the character of the Profession, and in imparting to him the right to exercise every thing pertaining to it, for the good of Society, and of himself. The possession of such a treasure, together with the rights pertaining to it, must necessarily imply on the part of the individual thus invested, certain obligations, for without the existence of these, the relation would be imperfect. These obligations, among other things, require of him that he shall exert himself in every reasonable manner, and on all proper occasions, to maintain the portion of professional reputation entrusted to his care; and that he shall also add to the common stock. For it has been in this way, and in this way alone, that our common character has been built up—has been formed. Like the mountains in the bottom of the ocean, it is the result of the joint labors of great men, faithfully and industriously carried on for a long series of years.

The question might here be raised as to the manner in which the Profession in our flourishing State is demeaning itself with reference to the moral standard we have adopted. Is it laboring with zeal and a singleness of purpose to promote the most desirable results, the elevation of our calling to the standard of the greatest possible degree of perfection? Are we all ready to make sacrifices both public and private for the general good?

Questions of this kind are not so easily disposed of as might at first view seem to appear. In looking over our State, and taking an imperfect view of our Physicians, and the manner in which they are demeaning themselves to the Profession and to the people, we see much to excite admiration and gratitude. Laboring for less pecuniary reward and at greater sacrifices of leisure, and all the conveniences and comforts of life, than what in these times pertains to any other kind of business, they seem, nevertheless, as a general rule, to be conducting themselves very creditably, so far as an honest and faithful observance of the essential rules of Ethics are concerned, while at the same time they are performing their duties to the people, frequently under circumstances of danger, with alacrity.

While such is true with regard to the great mass of the quiet and working part of the Profession, it is a matter of mortification that the same cannot be universally affirmed.

In looking around at the causes which embarrass the onward progress of the profession, our mind has been attracted to one, that in many sections of the State has had quite a prominent existence. We allude to the practice, in these times of "Liberty of Speech," of "speaking evil of each other." At present, perhaps, more than at any former period, there is a great rivalry going on between practicing Physicians, as well as between those engaged in teaching. All the energies of the race appear to be called out for the purpose of making an effort, and it is not difficult to recognize the general prevalence of the sentiment, "*success now or never.*" Under such circumstances, and in the general rush towards the accomplishment of purposes, much is done that should be left undone, and many things left undone that should be done. If we were to attempt a specification of what seems to be within the province of improprieties, we could not omit to notice under this head a practice that has got currency of medical men of making *ante mortem* dissections of each other. The object of the process, to keep up the figure, does not seem to be for the purpose of finding out what organs are well developed, and capable of moving off physiologically, but of finding out the weak ones.

The latter are selected as being very proper to lecture on in the social circle ; and they scarcely ever fail to secure the most profound attention. Time was in our profession when very few engaged in these exercises, and it was supposed that they were not very well calculated to promote dignity or result in profit. These days have passed away, and many now resort to them as a means of enjoyment, of securing notoriety, and obtaining position. *Tempora mutantur, et nos mutamur in illis.*

What has been sketched is not a mere fiction. Our conversation about each other, when surrounded by the circumstances of rivalry in practice or in teaching, too often wants candor, liberality and dignity. Old men are denied the veneration and respect due to their years and services ; younger ones, who happen to be prominent, are criticised, persecuted and occasionally slandered.

Involuntarily springing up in our minds just here, is the rumor of a serious outrage upon etiquette, which occurred during the past year, and in which some of our members were concerned. It constitutes no part of our desire to revive the recollections of the profession on a matter, the occurrence of which no doubt all engaged in, heartily regret. Nor is it any part of our recognized duty to attempt an investigation, as to which of the parties were most in fault. We have no right to admit the existence of any circumstances that should serve to extenuate conduct so objectionable, and so much at war with the dignity of our science. Our views are, that it was all wrong, uncalled for, and might have been avoided.

We regard it unnecessary to allude to the influence of such conduct upon the profession in the public mind, the place where we most need position at the present time.

As far as it becomes known, it will be every thing else than salutary. Upon the reputation of the individuals concerned in it, whether defeated or victorious, there will most likely be an illustration of that orthodox maxim, which says, that "The way of the transgressor is hard;" and it might at first view appear proper that our Society should be satisfied with that kind of redress for the injuries it has sustained. Had an offense of equal character been committed by individuals residing in some obscure portion of the State, such might be the most available disposition of the case. But, unfortunately, it has happened at a point which many of us would have been proud to regard as the Athens of Medical Literature for the whole West; and some of the individuals concerned in it have aspired to a position, and been recognized as teachers, not only of the various sciences which go to make up the Medical, but also of the *Ethics of the Profession!*

Whether in the future we are to continue to recognize them as teachers in the latter capacity, is a question not by any means free from difficulty. Perhaps they can promise us in the way of satisfaction something like what the eccentric Abernethy on a certain occasion offered to his students. This individual, as all know, was justly celebrated for his knowledge of Hygiene, and all the means calculated to promote health and long life—still he observed none of them himself, but, on the contrary, was in the habit of indulging very frequently in excesses and fits of intoxication. After concluding one of his inimitable lectures to his pupils, on the subject of temperance, in eating and drinking, etc., he remarked in the conclusion, that he wished no one to follow his own example—that he himself was a little like a certain parson and the guide board, both pointed the way, but neither followed the course.

A model Physician, with respect to troubles similar to those we have noticed, and as a remedy for them, has proposed the following prescription: "Love your enemies; bless them that curse you; do good to them that hate you; and pray for them that despitefully use and persecute you." This prescription has always had a high reputation for efficacy, and if not needed just now as a *remedy*, it might not be bad policy to take it as a *prophylactic.*

During the last year our attention has been called by some very respectable Physicians to that part of the intercourse between professional men called *consultation.* There appears to be, as far as we can learn, a growing indisposition among rival practitioners to meet each other at the bed-side, for the purpose of deliberating upon what should be done for the sick. Not long since a position got currency, and was published in some of the leading journals of the day, the substance of which was, that when one Physician called another one in to consult with him, it was equivalent to giving the latter a mortgage upon the patient. Although it is to be regretted very much that a position so humiliating should be thrown broad-cast before the Profession, notwithstanding it was in connection with some humorous and useful suggestions on other subjects, still the sentiment may be nothing less than a kind of spontaneous expression of a feeling that is more general than what might *a priori* have been expected. Without doubt there is in many regions a great falling off in the way of consultations. The testimony on this point is abundant.

In looking about for the causes of this state of things, we can see no propriety in attributing it to fruitless results to patient or Physician. This would reverse the plainest axioms of professional experience, and would be an insult to the judgment of the good and great wherever Medicine has been successfully cultivated. To the novice, consultations are indispensable, and to even the most experienced, they are of not less value than that of occasionally saving a valuable life.

Taking this for granted, other things must be invoked for an explanation. Is our intercourse at the bedside always characterized by pure motives—a proper care for the sick, and a desire to promote in every possible way the reputation of the attending Physician? We wish these questions could be answered in the affirmative. Once in a while when a Physician is called in consultation, he takes it for granted that his services have been required because of his superior skill. This may or it may not be the case. In either event, his conduct should be the same. There should be nothing like an assuming dictatorial course, or an attempt to criticise previous treatment.

Every word said by the consulting Physician, every motion he makes, and every expression of his countenance is observed and watched with the greatest possible precision; and should there be any thing in these that conflicts with what has been said or done by the attending Physician, or that even has appearances in that way, it results in destroying or impairing confidence in the latter, and his further attentions to the case, become disagreeable to himself, and unsatisfactory to the patient.

Another phase of the matter a little more humiliating, is occasionally observed. There are many Physicians whose general intentions are to do right, to deal honorably, and still it is hard work for them to let the opportunity pass unembraced, that will exalt them even at their worthy neighbor's expense. They seem to be unable to resist selfish impulses, and as a consequence, injury sooner or later to the Physician in attendance and to themselves is the result.

A course of procedure somewhat different in character, but not less objectionable in its consequences, not unfrequently takes place *in changing the prescriptions of the attending Physician, merely for the sake of change.* It matters not how well the treatment may have been adapted to the case, it is usual for some to think that their services will not be appreciated, *unless some change is made in the Medicine.*

Here the real object of consultations, that of giving the patient the benefit of science, and the inspiring him with confidence in his Physician, is sacrificed upon the altar of fallacious reasoning and selfishness, and perhaps a suspicion awakened in his mind, that the previous treatment has been wrong.

Changes in the treatment should as much as possible be avoided at the time a consultation takes place; and when even proper or necessary, they should be postponed, for the sake of the attending Physician, as long as would be compatible with the safety of the patient—certainly never made for the sake of a change or to gratify a whim of the consulting Physician.

According to the nature of the case it results that young practitioners, and Physicians who are just commencing business in a new location, most frequently require consultations. The consulting Physician is under such circumstances selected from among the old and well-tried. This is perhaps true in a large majority of cases. Now, this natural circumstance often begets on the part of the consulting Physician a feeling of professional importance, sometimes austerity, and occasionally dogmatism. He is apt to imagine that his services are required, as remarked in a previous connection, because of the possession of superior attainments. This may be the *reason* why he is called, and it may not be true. Many of our young men at the present time are so well posted up, that their practice would compare favorably with that of their seniors, in all of the cases requiring for their successful treatment, the possession of accurate knowledge. Indeed, it is by no means impossible, that an old, experienced Physician, may be frequently benefited by the suggestions of one of our industrious and energetic young men Why not, therefore, in order to promote the frequency of consultations, change the order a little, and have the seniors to request, where consultations are demanded, not the services of another senior, as is usually the case, but the services of one or more of the juniors. Old blood and young mixed together, sometimes secures results, for the accomplishment of which, it might safely be presumed, neither separately would be adequate. No harm can possibly result from a move of this character. It will exhibit a commendable liberality on the part of the older members, and will result in encouragement to the young, to many of whom indeed, who are just commencing and worthy, it will come as a "God send."

Impressed with the belief, that the value of consultations most frequently consists in inspiring confidence in the Physician having charge of the case, and in assisting him like one mariner would another that had been tossed about by contrary winds, to keep his latitude and longitude right, until safely anchored in the port of safety, we cannot avoid suggesting the propriety of a review and revision of the whole subject. Consultations cannot be dispensed with without incalculable detriment to the sick, saying nothing about their value, when honorably conducted, to the profession. But we repeat it, that it is the testimony of Physicians all over the State, that they are diminishing in frequency, that many of the older Physicians are avoiding them as useless, while the younger ones are complaining that they seldom ever get through with them without being injured. To us, the existence of such facts, are everything else than agreeable, and of course our only object in alluding to them is that our Society may look them in the face and make an effort at their correction.

A subject following within the range of Ethics, and, perhaps, of sufficient importance to merit a passing notice, is the compensation that the Physicians of our State are receiving for their services. With but few exceptions it appears to be insufficient. To some extent this has always been the case, but at the present it is eminently so. Every department of labor or service has demanded from the community increased rates of remuneration, while the attentions of the Physician, his deprivations and sacrifices have underwent so far as increase of compensation is concerned, no change. Indeed, we are not sure but that the reverse is true. Physician's bills, from all that we can learn, are now paid off with less money and more reluctance than they were a quarter of a century since. Many of our best educated young Physicians find out on entering the profession, that the compensation for their services, if even they succeed to a reasonable amount of business, is less than what can be obtained in many of the ordinary pursuits of life, and, as a consequence, they abandon the profession. Many too, who have labored in the ranks of the profession for years, find out at last that they are failing to secure the means necessary to sustain the infirmities of life, and in disgust turn their attention to other pursuits. What now is the remedy for this state of things ? Heretofore, reliance has been placed upon the getting up of "Fee Bills." Badly these have worked in most places where they have been tried. Too frequently the people have looked upon them as combinations to extort exorbitant charges, and it is humiliating to acknowledge it, but it is nevertheless a fact, that they have too often had their suspicions strengthed by the testimony of some worthless member of the profession, one of which can be found almost in every neighborhood, and who, by uniting in the clamor, have found it the most available way of obtaining business. In view of this state of things and the propriety of doing something, no measure seems to us more likely to be attended with good results than a general move upon the part of the older Physicians, those well established in the confidence of the community. Let them by concert of action take the proper ground in relation to the matter and maintain it, and the work will be done. What they do is generally regarded as right, should it even interfere with the usages of the purse. Besides, they owe it to themselves and to the profession, to lead off in a measure so necessary at the present time, and one that unless remedied, our profession will frequently have to be united with some other kind of business in order to furnish the means of a reasonable support.

Before closing what we have to say, it might not be improper to allude to the general standing of the profession at present in the public mind. Like many things, to which we have alluded, this is not what most of us desire. A constant fire kept up with great industry by all those, who muster in the ranks of the irregulars, has had the effect of destroying the confidence of large portions of different communities in the superiority of Scientific Medicine. It were well if this injurious influence was exerted only by the unwary and ignorant. Then we could look forward with some hope to the changes which the schoolmaster is making upon the race, as the era of deliverance from the trouble and annoyance. But how frequent, and how common it is to see those communities, that we regarded as being the most intelligent, taking the foremost rank in the patronage of the most transparent humbugs of the day. And what is worse, many of our distinguished men—those entrusted with the care of Church and State, and enjoying a large portion of public confidence, not only seem an easy prey to the mountbank, but, when occasion requires it, are ready to aid by their personal or official influence in almost anything, that detracts from the character and claims of medicine, scientifically studied and scientifically practiced.

Besides the operation of causes, *external*, we have those of an *internal* character, the influences of which are decidedly more fatal. To some of these we have already alluded in another connection, and only notice them here to increase attention to them, as our worst enemy. It is an old maxim that teaches the doctrine, that if we would have others respect us, we must respect ourselves. We have seen enough to convince us all, that, although our existence as a faculty is indispensible to the welfare of humanity, still we cannot rely on utility alone, as the means of securing confidence, and of giving us popularity. To amenity and straight-forward upright conduct, to a disposition to treat each other under all the circumstances of rivalry, as gentlemen, as brethren; to the habit in all our connections of avoiding contumelious or sarcastic remarks in relation to each other, to union among ourselves, and to our industry in cultivating every department of nature and art, available in the management of physical infirmities, we may look with confidence as being the only means of placing us in a position to command the respect and influence to which we are so justly entitled.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art. 1.—*Arsenic-Eaters.*

We translate the following from the Journal de Chimie Médicale, de Pharmacie, de Toxicologie, &c., Paris, July, 1854, for the benefit of those who may feel an interest in the extraordinary accounts which have been disseminated, concerning the people called arsenic-eaters. We doubt not the majority of our readers will agree with M. Chevallier, the intelligent editor of the Journal, that such improbable statements can only be believed when supported by better authority than the simple assertion of M. de Tschudi.

It has been made a subject of complaint that we have not spoken in our Journal of the *toxicophagi*, or *arsenic-eaters.* The facts reported have appeared to us so improbable, that we have put no faith in them; and our incredulity still persists. But since some of our readers ask for details, we think we cannot do better than give them an article published in the Presse Médicale Belge, of the 28th. We do not, however, advise them to experiment on this subject, for it is probable that something is wanting in France to enable us to become *toxicophagi.*

The Journal de la Société des Sciences Médicales et Naturalles de Bruxelles has just published an article of J. J. de Tschudi, which is really astonishing. Hitherto we have considered arsenic as one of the most active poisons, which could in no case agree with the digestive organs of man. Behold an error, a great error! Men can eat arsenic; men *do* eat arsenic! Heaven knows where the appetite will stop, if it is to be guided by the reports which this singular discovery has caused, and by the results which are attributed to this remarkable diet, for, it is said, young women regale themselves with it, out of coquetry, in order to render their complexions fresher and more rosy. It is enough to cast into the shade all the known specifics; the *eau de jouvence* can hardly sustain itself, its ancient reputation is so strongly threatened by arsenic.

"But this is all an idle story," we shall be told. By no manner of means; read the following article, and say what you think of it.

On the Toxicophagi. By Dr. J. J. de Tschudi.

"Some may have lately read in a report of a trial which took place at Cilli, before a jury, in a very remarkable case of poisoning, in which the defendant, Anne Alexander, was acquitted, that three witnesses for the prosecution were interrogated, as to the point whether a certain Lieutenant Matthias Wurzel were a *toxicophagus* or not. This fact was not proved, and the only evidence, though not important, which might give probability to this supposition, was that of the first-lieutenant, M. J***, who testified that in the year 1828, he had found in Wurzel's desk a small box containing fragments of the size of a grain of maize, which could have been nothing else than white arsenic. The testimony of the two other witnesses was founded upon hearsay only.

"The toxicophagi being phenomona more or less unknown to the medical public, I have thought it my duty to publish some information and observations on this subject.

"In some of the countries of Lower Austria and Styria, especially in the mountains which separate them from Hungary, is found among the peasants the remarkable custom of eating arsenic. They purchase it under the name of hedri, (*hedri, hedrich, huttegruuch,*) of wandering herbalists and pedlars, who obtain it, in their turn, from the workmen in the Hungarian glass-houses, from cattle doctors, charlatans, &c.

"The toxicophagi have two ends in view. In the first place, they desire to obtain by this dangerous practice an appearance of freshness and health, besides a certain amount of *embonpoint.* Young peasants, of both sexes, are consequently those who frequently have recourse to this expedient, through coquetry and the desire to please; and it is, in fact, surprising with what success they attain their end, for the young toxicophagi are especially distinguished for the freshness of their complexions, and by an appearance of flourishing health.

"I will cite but a single example among many cases which have come to my knowledge. A girl who watched cows, healthy, but thin and pale, lived on a farm in the parish of H***. Having a lover whom she wished to attract more strongly by her charms, she resorted to this well-known method, and took arsenic several times a week. The desired result was not long in appearing, and after a few months she became plump, chubby, in a word, all that the swain could desire. In order to excel in these respects, she imprudently increased the dose, and fell a victim to her coquetry. She died poisoned, and her end was a painful one.

"The number of deaths from abuse of arsenic is not trifling, especially among young people. Every clergyman of those countries has known several victims, and the results of my inquiries among the pastors have been very curious. Either from fear of the law, which forbids the illegal possession of arsenic, or from an inward voice which reproaches them for their fault, the toxicophagi dissemble, as much as possible, the use of this dangerous remedy. It is commonly the confessional or death-bed only, which removes the veil from the secret.

"The second advantage which the toxicophagi wish to gain, is to become more 'light'—that is to say, to facilitate respiration in mounting steep ascents. On every long excursion in the mountains, they take a small piece of arsenic, which they allow to dissolve slowly in the mouth. The effect of this is surprising; they ascend heights which they could only mount with the greatest difficulty without this practice. I may add here, that taking advantage of this hint, I have administered Fowler's solution with considerable success in cases of asthma.

"The quantity of arsenic with which the toxicophagi commences, equals, according to the avowal of some of them, a little piece of the size of a lentil, which would make rather less than half a grain.* They stop at this dose, which they take several times a week, in the morning, fasting for a considerable time, 'in order to get used to it;' then they increase the dose gradually, with precaution, according as the ordinary quantity loses its effect. A peasant, R***, of the commune Ag**, 60 years old, and enjoying very good health, now takes at each dose a piece of about four grains. It is more than forty years since he acquired this habit, which he inherited from his father, and which he will bequeath to his sons.

"It is well to note, that no trace of arsenical cachexy is visible in this individual, nor in many other toxicophagi; that the symptoms of arsenical poisoning never appear in those who know how to apportion the dose, sometimes very considerable, of the poison, to their constitution and tolerance. We must also remark, that the suspension of the use of arsenic, either from inability to obtain the article, or because the individuals abstain from the arsenious acid from some other reason, is always followed by morbid phenomena, which resemble those produced by arsenical intoxication to a feeble degree. Thus, we observe much general uneasiness, with great indifference for everything around the patient, anxiety, disturbance of digestion, loss of appetite, a sensation of fullness at the stomach, vomiting of a glairy fluid in the morning, with ptyalism, pyrosis, spasmodic constriction of the pharynx, spasmodic pain, constipation, and especially embarassment of the respiration. For all these phenomena, there is but one effectual remedy—the immediate return to the use of arsenic. According to the most exact information obtained from the inhabitants of these districts, arsenic eating never degenerates into a passion—like, for example, opium eating in the East, the use of the betel in India and Polynesia, or the loca in Peru—it becomes rather a necessity to those who addict themselves to it.

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*This calculation is not exact.

"The employment of arsenic by these people finds its parallel in that of corrosive sublimate in other countries. I will merely allude to the well-known case, confirmed by the English ambassador in Turkey, of an opium-eater at Brussa, who swallowed daily along with his opium, the enormous quantity of forty grains of corrosive sublimate. In the mountains of Peru I have frequently met with similar individuals; and in Bolivia, the employment of this drug exists to such an extent, that it is openly sold to the Indians in the provision market!

"It is needless to call attention to the extensive use of arsenic even at Vienna, especially among the grooms and coachmen of the mansions of the great. They mix a good pinch of the powder with oats; or, attaching to the bridle a fragment of the size of a pea, wrapped in linen, when the horse is harnessed, the saliva dissolves the poison. The glossy, round, and elegant appearance of valuable horses, and especially the white foam from the mouth, are generally due to arsenic, which, as is well known, increases saliva. The teamsters in mountainous countries frequently add a dose of arsenic to the fodder which they give to their horses before a laborious ascent. The jockeys often make use of small shot for broken-winded horses, which they are carrying to market. It appears that the invariable effect of this manœuver, an effect which lasts several days, is owing solely to the arsenic which the shot contain. In the manufacture of these projectiles, one per cent. of white and yellow arsenic is added to the lead, to render the mass more fluid and apt to assume a spherical form. The quantity of arsenic found in the possession of these grooms is often very considerable, and their carelessness most culpable.

"R***, a brewer at A***, placed in the hands of M. B. Sch***, a piece of arsenic weighing three-quarters of a pound, which he found in the trunk of his servant. Last winter a peasant poisoned himself in my neighborhood, with a piece of arsenic of the size of a pear, which he pulverized and swallowed in water. He expired half an hour afterwards.

"This practice may continue for years without accident; but as soon as the horse passes into the hands of a master who does not employ arsenic, he becomes thin and wan, loses his spirits, and in spite of the most abundant nourishment, the animal never recovers his former external appearance.

"These remarks on the toxicophagi, hastily sketched, may serve to show how useful it is to physicians and legal gentlemen to be aware of this wide-spread abuse in certain districts of the Austrian monarchy. The judicial proceedings alluded to at the commencement of this article, did not render it evident whether M. Wurzel were an arsenic-eater or not, but it is allowable to believe that he was. If the autopsy and chemical investigation had not been made with unpardonable negligence—if the defendant (gifted with rare intelligence) had been embarassed by the reiterated interrogatories to which she was subjected, and had been surprised into contradictory or inaccurate statements, it is probable that the verdict of the jury would have been less favorable to Anne Alexander, in spite of her innocence."

On the Toxicophagi. By Dr. Tschudi. (*Wiener Medizinische Wochenschrift,* No. 1, 1853.)

"The immense interest excited by my communications on the toxicophagi, in the 28th number of the first year of this Journal, induced me to devote, during the period of a year, my whole attention to this fact, so interesting in a medical and legal point of view, and which, if not denied, has been at least doubted by several English journals. I have been able, during this time, to confirm, perfectly, my former statements, and to increase them by identical examples. One of the most inveterate arsenic-eaters, who at first, as usual, denied most obstinately making use, personally, of arsenic, in the end made the fullest avowal, and told me that he had taken his dose of arsenic with great regularity from his 27th year to the age of 63, several times (eight to ten) per month, at the time of new moon. He began with a small fragment of the size of a flax-seed, and during many years did not go beyond a dose which he indicated by a bit of charcoal. I took the trouble to weigh a piece of Hungarian arsenic of the same dimension; the weight was between three and four grains. When I asked him why he had never increased the quantity, he replied that he had not dared to do so, having been made ill by it some years previously. At that time, he took, while intoxicated, a larger quantity, which occasioned violent cholic, a burning pain in the throat, griping at the stomach, &c. The reason why he has abstained from arsenic for nearly two years, is the death of one of his friends, also an arsenic-eater, who died of dropsy, and who had suffered much. He thought this was owing to the arsenic, and dreading a similar fate, had not taken the 'hidri' since, although this abstinence caused him much inconvenience.

"Since this man has ceased taking arsenic, he is frequently subject to violent gastrodynia, During all the time that he was addicted to it, he was ill only once, of a pneumonia. A circumstance worthy of remark was the immunity which this individual enjoyed from the itch, at a time when every individual in the house, with whom he lived in uninterrupted contact, was attacked by it. According to an approximate calculation, this man took, during thirty-five years, from twenty to twenty-two ounces of arsenic; and yet this frightful quantity of one of the most violent of the metallic poisons, produced no considerable alteration of the health, if we except a certain thickness and roughness of the voice, which moreover was more marked a few years ago. This phenomenon is very general among the arsenic-eaters.

"I subjoin here an extract from a letter of a clergyman, A**** de M***, who reports concerning this fact—'The information I have obtained shows that the individual in question carefully concealed his secret from every one; it was generally said, however, that it was a case of arsenic-eating. This man is 55 years old, appears in very good health, is strong, and has never been seriously ill, but he is always *hoarse.* He conceals the use of arsenic through fear of encountering the rigor of the law by the possession and employment of this poison. He would find himself deprived of a remedy indispensable to his health, and would be unable to obtain it. It is said that he increases the dose at the new moon, and diminishes it as she wanes.

"The manner of taking the arsenic varies much with different toxicophagi. Some take their dose all at once, allowing it to dissolve slowly in the mouth, and on an empty stomach. Others reduce it to powder, and sprinkle it on bread, or on a small lump of fresh lard. Most of them observe the lunar phases, which play so important a part in popular therapeutics, and suspend, or considerably diminish the quantity of arsenic towards the end of the moon. Those who use it to facilitate the mounting of ascents, take it at the moment of starting, without regard to the lunar period.

"I cannot refrain from alluding here to an attempt at poisoning which was reported in several journals, if I mistake not, towards the end of 1852, or the beginning of 1853.

"A domestic at a country seat in the north of France, desired to rid himself of a superintendence which he found too severe. For this purpose he mixed arsenic with the food of a lady for a considerable length of time, hoping to be able to avoid every suspicion of murder by the slow operation of the poison and of the symptoms which resulted from it. To his great astonisment he beheld the lady gaining visibly for several months in flesh, appearance and spirits. Perceiving that the small doses produced a contrary effect to that which he desired, he mixed a much larger quantity with some fricasee chicken. The violence of the symptoms speedily produced by this dish led to the discovery of the attempt at poisoning, and of its author, who was arrested. In this case we see the same phenomena presented by the toxicophagi of our countries.

"At the time of my first communications on this subject, I was acquainted with arsenic-eating only in a small district of Lower Austria and Styria; since then I have received communications from other and highly respectable sources, from which it appears that the use of this poison is pretty generally spread in the mountains of Austria, of Styria, and especially at Salzbourg, and in the Tyrol, among the chamois-hunters. M. Schneider, in his work on "Chimie Legale (pp. 169, 1851), speaks of this, and refers to the large doses of arsenic prescribed by some physicians without evil effects. While this article was in the printer's hands, the following very interesting communication reached me from a friendly and highly respectable source :—" M. F*** St***, director of the arsenic mines belonging to a wholesale druggist, M. F. S., at M***kl, in L**au, has taken every morning for many years, a small pinch (as much as the point of a knife will hold) of powdered arsenic, to preserve himself against the pernicions effects of the manufacture of arsenic. This gentleman sent to a distinguished Physician of the place one of these pinches, which he takes openly, and this quantity weighed three and a quarter grains. Consequently he ingests daily from three to four grains of arsenic, and he enjoys excellent health. It is said that he furnishes his workmen with a system of rules on the manner of using arsenic as a prophylactic against the injurious effects of the mining of this poison.

Let us now pass to animals. Horses are those to which arsenic is most generally given. I have already explained the object of this practice, and I will complete my communication by describing the mode of proceeding. Every groom has a different way, but each adheres rigorously to his method once chosen ; and all agree on this point, that arsenic ought to be administered to horses only at the new moon. Some give it daily at this time, in the dose of three or four grains. Others administer it until full moon, two days at a time, suspending it during two days, and then increasing the quantity the next two days. During these intervals they give the animals, once a week, an aloetic purgative. These people observe rigorously the rule to give arsenic to horses only after giving them food and water. A piece of bread serves as vehicle for the arsenical powder. If the animal is to take arsenic while in use, a piece is wrapped up in linen, or some of the powder is scattered on lard also enveloped in linen, and the whole is attached to the bit or bridle. It appears that a part of the poison is eliminated with the excrements, for it is often noticed that chickens die after eating the oats contained in dung of horses subjected to an arsenical regimen. The grooms pretend that arsenic is an infallible preventive against the cholic of horses fed on rye, which is well known to predispose to this affection.

" The use of arsenic for horned cattle is less frequent ; it is only given to oxen and calves intended for fattening. The precautions respecting the lunar phases above described, are equally observed, and the arsenical powder is given to the animal with oat meal mixed with chopped straw, and infused in warm water. The effect is very surprising as to the increase in the size of the animal, but he does not gain proportionably in weight. For this reason the butchers rarely buy cattle fattened in this manner, by the eye, for the real weight is inferior to that which might be inferred from the appearance. It is needless to remark that this process is only employed for cattle intended for fattening, and never for draught animals. In Styria, as well as in Austria, there are farmers who, on account of this practice, are known by the name of *hidri-bauer* (arsenic-peasants). Arsenic is often given in small doses to hogs, especially when beginning to fatten them ; a dose of the sulphuret of antimony is given daily. It has been found that the *purified* sulphuret of antimony (*antimonium sulphuratum nigrum lœvigatum*), such as is prepared by the druggists, is inert, and that it is only the wholesale article which exerts its known effect. This may be owing to the not insignificant quantity of sulphuret of arsenic usually contained in the latter article.

" It will be seen that the employment of arsenic with animals is subject to the same rules observed by the toxicophagi themselves. It would not be uninteresting to know whether the beneficial effects of small doses of this poison in animals has led to experiments on the human subject, or *vice versa,* if this practice passed from the province of human therapeutics to that of animals."

Note by the Editor.—It is to be wished that scientific men living in the localities where the *arsenic-eaters* are said to be found, would confirm or deny the facts advanced by M. Tschudi.—*Boston Medical and Surgical Journal.* A. Chevallier.

Art. II.—*The Sugar-House Cure for Bronchial, Dyspeptic and Consumptive Complaints.* By Samuel A. Cartwright, M. D., New Orleans.

Cane-juice kills Animalcules—Its vapor respired promotes Nutrition and the cure of Bronchial and Consumptive Complaints—The Case of the Pale Man —Cautions against expecting too much or too little.

An article lately forwarded to the Boston Medical and Surgical Journal, closed with an argument in favor of the direct application of the ferment called *dunder* (the elements of which are contained in the vapor of boiling cane-juice) to the mucous membrane of the air-passages, softened or thickened in bronchial and consumptive affections, drawn from the analogy of the good effects of the ferment, called *yeast,* in certain morbid conditions of the mucous membrane of the alimentary canal, occurring in some forms of typhus and typhoid diseases. It was mentioned, however, that analytical reasoning was not a safe guide in therapeutics, and some higher evidence of the virtues of the sugar-house remedy was promised. It may be well to premise, that the alcoholic liquor known as rum, is obtained from sugar alone; the ferment called *dunder*, being an aromatic substance obtained from the skimmings of boiling cane-juice; "which is," says Mr. Wray, "only necessary to assist in the decomposition of the sugar in its metamorphosis into rum."—(Practical Sugar Planter, by Leonard Wray, Esq., page 297. London: Smith, Elder & Co., 1848.) Dr. Thompson, in his Clinical Lectures on Consumption (page 55, Philadelphia: Lindsay & Blakiston, 1854,) speaking of the ferment called yeast, says: "It often gives relief as a gargle to the sore throat of scarlatina; and its remarkable power of separating sugar from its combinations, and altering its character, might lead us to anticipate its possessing properties competent to influence favorably the digestive process," &c. But the ferment called dunder, is not the only substance inhaled in the vapor arising from boiling cane-juice. Arequin, a French Chemist, of New Orleans, whom Liebeg, Dumas and Gerhardt quote in their works as the very highest authority in the analysis of cane-juice, has discovered a peculiar principle in that liquor, which he calls *cerosie.* He says it is an unique natural alcohol, and presents the only instance known in nature of an alcoholic substance being produced without artificial agency. The new and wonderful science of optical chemistry proves that one of the chief constituents of the liquor in the clarifiers, from which the fragrant, saccharine vapor arises, has the power to rotate the plain of polarization of polarized light 100 degrees to the right. It requires nothing but credulity to believe in spirit-rapping and table-turning. Someting more is required to understand the beautiful and wonderful phenomena revealed by optical chemistry. They should be understood before it can be expected that strong minds, bolted and doubly barred against humbugs, will receive the truth in regard to the virtues of the inhalation of the vapor of boiling cane-juice in bronchial, dyspeptic and consumptive complaints. It is all right that the door of the temple of science should be locked against alleged facts, contrary to reason and analogy, as those of homœopathy, &c., the admission of which would ignore better-established facts and crowd all others out; but it is a narrow prejudice which would exclude, without examination, new facts brought to light by the inductive philosophy, that so far from being in opposition to other long-received and well-established facts, confirm, harmonize and explain them more fully.

According to the experiments of Carminati (Opus Therap.), confirmed by Magendie, the essential salt of cane-juice destroys such cold-blooded animals as toads and lizards, whether applied externally or given internally. There are also many conflicting facts in regard to the virtues of sugar—some proving that it breeds worms, causes scurvy and injures the teeth; others that it destroys worms, cures scurvy and whitens the teeth. These facts are reconciled by the discovery of the two kinds of sugar—the *dextrogyrate* and the *lævogyrate*. I took an alligator to the chemical laboratory, requesting Mr. Riddell to try if the respiration of carbonic acid gas would kill it. After trying the gas upon it for a good part of the day, it was brought back as lively and vigorous as ever. It was thought that owing to the size of the animal, the vessel it was put into might have contained a small portion of atmospheric air. I then gave it some pure dextrogyrate sugar from the plantation of P. M. Lapice, Esq., being some of the same parcel which was made *by first process*, and rotated 100 degrees to the right. Also a solution of it was smeared over its body. This was in the evening. The next morning the alligator was found perfectly dead.

About this time Prof. Riddell was engaged in looking into a new world, invisible to the naked eye, through his powerful microscope. The sediment taken from the gutters was found to be alive with rotifera and various other hideous looking animalculæ. The most numerous amongst them was a species of the *Euchlanis* and the *Leucophrys patula*, described by Pritchard in his "Infusorial animalcules, London, 1852." They briskly moved through an algoid substance, called by the professor *ocillaria*. He fed them with various matters, such as carmine, which they devoured with the same rapacity that hungry, ravenous beasts, in the visible world, devour their food. He fed them on human blood, which they gobbled down with a keen relish. At length I handed to the professor a stock of mature cane, just cut from the field of a sugar plantation. He squeezed some juice out of it, and put a speck into the nidus of these ravenous animals. It killed the whole of them as quick as lightning. Young Riddell, a smart boy about 12 years of age, suggested to his father, the professor, to try to bring them to life by the same means that he had brought others to life, killed with chloroform. He tried, but could not bring them to life. They were dead. Among them was a nondescript animalcule resembling a tape-worm. It did not die instantly as the others did, but all it joints came apart, and in a few seconds every joint was dead.

There was then lying in Toulouse street, in the heart of the French part of New Orleans, an exile from la belle France, whom the auscultators of Paris, headed by Louis, had banished from his country at the age of 23. The sea voyage, change of climate, and success in business, averted the disease of the lungs for which he had been banished. A number of years passed away in the enjoyment of health. But at length in the year 1852, after he had accumulated a competency, and the stimulus of necessity was withdrawn, the lung disease returned with redoubled violence and soon disqualified him for business of all kinds, and confined him within doors, coughing and expectorating his life away. Racked with pain and burning with hectic, he left the inland town in which he had been residing, came to New Orleans, and took rooms on Toulouse street, to die, as his friends thought, among the French people. His friends converted his effects into cash. His disease had made such progress, that opium, aconite, prussic acid, and such things, were regarded as the only remedies that could palliate his sufferings. For several long months he had been confined to his room. On his removal to the city he consulted me. I had just despatched my first article on the sugar-house cure to Boston—and endeavored to prevail on him to try the sugar-house remedy. I did not regard his case in the same unfavorable light that others did, whose opinions are entitled to respect. Although there was some purulent expectoration, yet the copious quantities of mucous, viscid matter exporated, indicated that bronchitis had more to do with the complaint than tubercular softening. The loud sounds from the abundant mucous, thrown off by the relaxed lining of the air-passages into the dilated bronchial tubes did not frighten me at all. Nor did the hectic fever and sweats. These are small matters when not caused by tubercular softening, organic lesions, or cavities in the lungs. Convinced by a careful examination of his case that there was no great or irreparable lesion of the pulmonary substance, but that the chief difficulty consisted in an imperfect hæmatosis, owing to the cells and smaller air-tubes being obstructed with a tenacious mucous exudation, and that the throat affection, as well as the softened state of the mucous membranes, were effects of the mal-assimilation of the blood, from defective hæmatosis, the sugar-house cure was strongly urged upon him. All his French friends seemed to be armed against it. "It would bring on diarrhœa." "It would sweat him to death." "He would catch his death of cold, if he were to leave his comfortable quarters to encounter the discomforts of a sugar-house." "Where was the authority of the American doctor for advising such a measure?" Alas! he had none; not even among his own countrymen, the American physicians up town. Not one of them believed in the sugar-house cure. "If there were anything in it, it would have been discovered before." *It had been discovered before!* The sugar-makers, overseers and planters, of observation, had discovered it before. The lean, dyspeptic, coughing adults, and wormy, scrofulous, and emaciated children, have been repeatedly sent into the sugar-house by intelligent planters and overseers, during the rolling season or cane harvest. Those among them, able to work, were always put over the kettles to skim the boiling cane juice. They were observed to get well and fat. But these facts had not found their way into medical books, and hence were passed unnoticed by the profession. They had not got to London or Paris, and nothing can be valuable in science, according to some, which has not got the London or Parisian stamp on it. After having despaired of getting the Toulouse patient in a sugar-house, I witnessed the above-mentioned experiment on the animalcules. Filled with enthusiasm sufficient to conquer obstacles, I went to Toulouse street, and quickly overcoming all opposition, I had the patient in a sugar-house in a very short time thereafter. In sending him to a sugar-house, I sent him to one of the very best—to Mr. Lapice's plantation, in the Parish of St. James, where sugar is made by "*the first process,*" on the very day the canes are cut down. Time passed by, and at length, on the 2d of June, 1853, Dr. Dowler called and inquired of me who that "*pale man*" was, who was present the day before at the vivisection of the four alligators? As several pale-looking physicians were present, I inquired which one he meant? "The one," he replied, "who made several important suggestions while the experiments were going on, was perfectly at home in anatomy, and well posted up in the very latest physiological researches of the savans of Europe. He speaks English with an accent. Where did he come from?" From Lapice's sugar-house, Parish of St. James, Louisiana, was the reply. He went to the sugar-house from Toulouse street, where his friends in the autumn of 1852, had prepared rooms for him, and had made arrangements for the supposed dying man to have every comfort and consolation that this city could afford, and at the same time to be in a part of it where his native French is chiefly spoken. The auscultators had banished him from Paris, his native city, and I banished him to a sugar-house. Three months or more before coming to Toulouse street, he had been confined to his house, and disqualified for all business, by reason of the chest affection, and the cough, fever, debility and emaciation that attended it. Since the vivisection of the four alligators, upwards of fifteen months ago, "*the pale man*" has been actively engaged in the practice of medicine in town and country, in the enjoyment of pretty good health, with the exception of an attack of yellow fever which he passed through without detriment to his constitution. Dr. Chapellier, of Natchez, would scarcely be recognized, in 1854, as the pale, emaciated patient of Toulouse st., with the church-yard cough, in the year 1852.

Other remedies, of course, were used in the treatment of his case, but the inhalation of the vapor from the boiling cane-juice, was worth more than the whole of them put together. It let in the air to the air-cells of the lungs, by disembarrassing the bronchial tubes of the viscid mucous which shut it out. It removed the pathological condition of the lining membrane of those tubes, consisting of softening and thickening, on which the abnormal secretion of mucus depended. That it did so, is inferred from its speedy effect in giving strength to the voice. It put flesh on the patient's bones by virtue of the physiological relation, much overlooked, between the functions of assimilation, nutrition and *respiration;* perhaps also by the direct absorption of the nutritious matter, contained in the vapor, into the nutritive fluids of the body.

There are many facts to show that persons respiring the saccharine vapor from the boiling cane-juice, gain flesh and lose much of their appetite at the same time. Mr. M., from Watumka, Al., mentioned in the author's last article, as shown to Prof. Riddell and others, is an instance. In that article, Mr. Wray, by mistake, was incorrectly quoted as attributing fattening qualities to the vapor. In the "Practical Sugar Planter," page 21, chap. xi., "*On the Cane plant,*" speaking of its essential salt, Mr. Wray says: "Its nutritious and fattening qualities are abundantly shown on every sugar-estate in the world; however, as this admits of no doubt, I need not dwell on so clear a fact." In the author's first article, he showed that it could not be the sugar or essential constituent of the cane-juice which fattened; because it is only on sugar-estates that it is observed, and only on *them* during the rolling season, and moreover only *among* that class of persons on the sugar-estates breathing the vapor. It has now been two years since the subject was brought before the regular medical profession through an old and well-established Medical Journal. The author's humble contributions to science have attracted more attention from the faculty, and have been more favorably noticed by medical writers and the organs of the profession, than he had any reason to hope or expect; and, with two or three exceptions, they have done him more than justice. His sugar-house remedy is one of the exceptions—the public press having nearly killed it with kindness, and given it a notoriety causing the faculty to regard it as a humbug. The proofs, that inhaling the vapor of boiling cane-juice or something or other in a sugar-house during the rolling season, fattens, are overwhelming and convincing. It is not the voice of London or Paris, changing its tones as fashion changes, and often contradicting itself, that is speaking; but Nature herself, uttering the same voice, and declaring the same fact through the lapse of ages, throughout the entire sugar region of the eastern and western continent. To that voice, the highest of all authority, the humble author, seeking nothing and fearing nothing, has invoked the profession to listen. It tells of something most important to the physiologist, and which may be — nay, which has been found to be—highly useful in the treatment of bronchial, dyspeptic and consumptive complaints. If the inhalation of the vapor could only cure one case in a hundred that could not be cured without it, it would be worth the attention of the profession. Yet scarcely any of the regular faculty have noticed it. The editors of the various medical journals have quietly sat by and seen garbled quotations and misrepresentations of the original paper on the sugar-house remedy, going the rounds of the newspapers, in Europe and America, without any attempt to correct them. The consequence is, that many unfortunate individuals, in the last and hopeless stage of consumption, with large cavities in the lungs, have been, and may yet be attracted into the sugar-houses, under the mistaken belief, gathered from abstracts and notices in the public press, uncontradicted by the medical journals, that the author has recommended the inhalation of the vapor of boiling cane-juice as a sure cure for consumption, regardless of its stage. Whereas he has recommended no such thing. The author's article on cholera shared the same fate. Scarcely any of the medical journals noticed it at all, and their readers, the physicians, were mostly left to form their opinions of that paper, as the one on the sugar-house vapor, from what they saw in the public press; and the author has grounds to believe that many of them, seeing so much said in the newspapers, and nothing in the regular organs of the profession, have been so far misled as to do him the injustice to suppose that he has been writing articles in the newspapers to instruct the public how to cure themselves of cholera, consumption, &c., without the aid of physicians. Whereas, the truth is that he has addressed himself all the time to the physicians, through their regular organs, and not to the public through the daily papers. It is true that an essay on the cholera, written for a medical journal, but being too late, was published at his own expense, in pamphlet form, expressly stating that it was "*addressed not to sophomores or pretenders, but to intelligent and well-bred members of the profession,*" and also instructions to planters what medicines to provide themselves with, how to prepare and preserve them from injury, and how to use them in cases of emergency until a physician could be had. There is nothing unprofessional in this, because in the south-west the planters are their own apothecaries, and depend upon their physicians to give them instructions what medicines to get, how to compound and divide the same into doses, and what to do in case of emergency. Physicians do not furnish the medicine or carry it with them, as in country practice elsewhere, but each plantation is provided with its own apothecary shop on a larger or smaller scale, and a person to put up and prepare the medicine under the physician's instructions. The author exercised the right of consulting Hippocrates and the great fathers of medical science, and on their authority restored to the plantation apothecary shops a family of plants, which the Edinburgh physicians about a century ago, had, in a great degree, excluded from regular practice, in consequence of their experience having found them to be too exciting for the hot, inflammatory diseases of that high latitude; but their experience did not ignore the experience of the regular medical profession of the preceding two thousand years—declaring the *piper longum* and the *piper nigrum* to be valuable therapeutic agents in the cold, congestive diseases of countries farther South. The Edinburgh school had no more right to *reform medicine* by excluding those aromatic stimulants, derived from the pepper family of plants, from regular practice, than the botanical school to exclude mineral medicines. Standing on the eternal rock of this self-evident truth, the author has no apology to make for his use of strong aromatic stimulants in full doses, or for combining them with camphor and calomel, in the first stage of cholera, before the vital forces have become too much impaired for a salutary revulsion to be made to the surface. But he has an explanation to make to the profession how it happened, that a method of treatment, which in his hands, and many others, has proved far more successful than any other in preventing mortality from cholera, should have fallen into discredit with so many intelligent physicians.

Some years ago, during the cholera excitement, a letter from the pen of the Hon. Robert J. Walker, then Secretary of the Treasury, was published in New York, detailing his recollection of the author's treatment of that disease, as witnessed by himself. The remarkable and wonderful success truly attributed to it by a prominent member of the cabinet, caused it to be used in the first cases of collapse cholera that occurred in New York and many other places. The great error was in using it in collapse at all. It was not in collapse or the last stages that the Hon. Secretary had witnessed its wonderful effects, but in preventing collapse—by its being resorted to in the very first stage of the painless diarrhœa, so apt to run into the hopeless, pulseless stage, unless arrested by timely and efficient means to make a revulsion to the surface. It forthwith fell into disrepute, because it did not come up to the extravagant expectations of those who resorted to it in the blue, pulseless cholera ; a stage of the disease in which the author himself never relied upon it. In the last stages of that, as in other diseases, *no powerfully perturbating method of treatment is admissible.* It does no good, and often hastens the fatal catastrophe. The author tried to correct the error, that newspaper versions of his opinions and practice in cholera had led to, but it was too late. What he said was not heeded, but what others, misunderstanding him, had said.

The author has never recommended the sugar-house remedy as a cure for consumption in its last and hopeless stages ; but newspaper misrepresentations and incorrect abridgements, altering the sense more or less of what he did say, have done it for him, and will assuredly bring the sugar-house cure for bronchial, dyspeptic and consumptive complaints into disrepute unless timely corrected. The precise limit of the efficacy of the inhalation of the vapor of boiling cane-juice, in opening the obstructed bronchial tubes and in influencing favorably their mucous lining, is not yet ascertained; but that it possesses some remarkable virtues in this respect, there is much good evidence to prove.

The strong-minded woman from Boston, in a sugar-house, with bronchitis, and other ills, comes next.—*Boston Med. and Surg. Jour.*

Canal st., New Orleans, Sept., 7, 1854.

Art. III.—*Post-Mortem Appearances in Cholera.* By Isaac Pidduck, M. D.

In the year 1832, meeting Sir Astley Cooper in consultation, I inquired if he had seen any cases of cholera? No, he replied, but that he had seen several *interiors*. His description of the post-mortem appearances so exactly tallied with those recorded by Dr. Robinson, of Newcastle, that the specific character of the disease after an interval of twenty-two years, remains precisely the same. The two points upon which Sir Astley Cooper remarked were, the inflammatory condition of the stomach and intestines, and the distension of the gall-bladder; and these are the prominent appearances, recorded by Dr. Robinson, and which have presented themselves in almost all the cases of cholera which have been examined. As the only successful practice is based upon correct pathology, I at once determined to treat the disease according to the post-mortem appearances. In each successive irruption of cholera, this rule of practice has been my guide, and the success which has attended it has encouraged me to persevere.

Of the nature of the poison which causes this morbid condition of the alimentary canal and distention of the gall-bladder, we are as ignorant as we are of the nature of certain ophidian poisons, which cause pneumonia, or destroy the coagulating quality of the blood; but the indications for the cure of cholera are clearly—

First, to empty the distended gall-bladder; and second, to allay the inflammatory condition of the stomach and bowels.

To fulfil the first indication, the salt emetic is the safest and most effectual. If this be followed by calomel and rhubarb, copious bilious evacuations will be procured, and with them all the dangerous symptoms of the disease will subside. To empty the gall-bladder is essential to the patient's recovery; for if re-action be established without this emptying of the gall-bladder, bilious fever sets in, and proves as fatal as the cholera itself in the stage of collapse.

The second indication—to allay the inflammatory condition of the bowels, and also in evacuating the contents of the gall-bladder—is fulfilled by the saline treatment prescribed by Dr. Stevens, assisted by the calomel and rhubarb.

In this unwonted disease there are two strong instinctive desires on the part of the patient—the one is for cold water, and the other is for salt, or more properly for the saline powders. Therefore the desires of the patient may be safely gratified, and cold (iced) water allowed, *ad libitum.* If the view I have taken of this dreadful disease be correct, it is obvious that all endeavors to promote reaction by means of *stimulants,* and to stop the natural efforts to unload the gall-bladder by means of *astringents,* must be worse than useless; they must inevitably tend to seal the fate of the patient, by locking up within him the *casus morbi.*

The same principle should guide us in the treatment of the premonitory diarrhœa, which is cholera undergoing a natural cure. In innumerable cases, a small dose of calomel and rhubarb, followed by castor oil, by carrying off the redundant secretion of bile, arrests the diarrhœa at once; whereas if it be stopped by astringents and sedatives, a simple disease becomes complicated, and a bilious diarrhœa exchanged for a bilious fever of a grave character.—*London Lancet.*

ART. IV.—*Extracts from an Unpublished Report on the Medical Literature of Kentucky.* By LUNSFORD P. YANDELL, M. D.

DR. DANIEL DRAKE, though a citizen of Ohio at the time of his death, spent a large portion of his active life in Kentucky, and is justly claimed by her as one of her Medical Authors. Having returned to his practice in Cincinnati, in 1818, at the breaking up of the Medical Faculty of Transylvania University, of which he was a member, and having engaged in an unsuccessful effort to rear a Medical School in that city, he was induced to accept again the chair in Lexington, which he had resigned five years before. His first connection with this school gave rise to nothing of a public professional character that merits any notice in this Report, although previous to this time Dr. Drake had become an author of note. His "Picture of Cincinnati" had made him known to scientific men abroad, and he returned to Transylvania University with a high reputation for ability and learning. The public Lecture which he delivered introductory to his first course on Materia Medica, November, 1823, was published at the request of the Medical Class. The subject of the lecture was "The Incentives to Professional Study," and his manner of treating it was esteemed peculiarly happy. It was an eloquent discourse, abounding in thoughts calculated to excite the ambition and kindle the zeal of his pupils.

This inaugural address, we believe, is the only publication of which Dr. Drake's reunion with the Lexington Medical Faculty was productive. He resigned his professorship in Transylvania a second time, in 1827, at the close of his fourth course of lectures. In 1839 he was invited to Louisville, to a chair in the Medical Institute, just then entering upon its third session, and we find him in the winter of that year lecturing on Pathological Anatomy and Clinical Medicine, and contributing again to the Medical literature of Kentucky. His valedictory lecture to the graduating class was published. The subject of the lecture was the importance of Clinical Instruction to students of medicine. It was determined by the Faculty soon after Dr. Drake came into the school, to revive the medical journal which had been suspended after the issue of the second number, and he consented to become one of the editors. The first number of the *Western Journal of Medicine and Surgery* was published on the first of January, 1840. The name is nearly the same as that of the Journal which he had conducted in Cincinnati to the tenth volume, and of which he regarded this as a continuation. The pages of the first number were enlivened by some characteristic editorial articles from his pen, in which light, off-hand work, where the pun, the anecdote, wit and humor, are blended agreeably with science, he greatly excelled. During his connection with the journal he indulged freely his taste for such writing. His "Traveling Editorials," as he termed them, letters written to his colleagues during his tours to collect materials for his great work since published, were read, perhaps, with as much interest as any other articles in the journal. He reported in the second volume (p. 343), a case of "Intermittent Fever, complicated with Hepatitis, Pneumonitis, Laryngitis, and Intestinal Irritation." He closes his history of the case with the following characteristic paragraph :

"To such of our readers as may think their time lost by the perusal of this article, we beg leave to say, that the afternoon (July 29), is oppressively hot; and that if we were writing in as pleasant weather as they will read, we should no doubt forestall them in that criticism."

At the Medical Convention held at Frankfort, in January, 1841, he read an elaborate memoir on "the Disease called by the people 'Trembles,' and 'Sick Stomach,' 'Milk-sickness,' as they occurred in the counties of Fayette, Madison, Clark, and Greene, Ohio." He proceeds first to show by "way of exclusion," what agents cannot give rise to the disease, and arrives, by this process, at the conclusion that it is probably engendered by the *Rhus radican.* In his first object he is entirely successful; he proves most satisfactorily that milk-sickness cannot originate in any of the causes that have been heretofore assigned ; but in the second he seems to have failed as signally as any who had written on the subject before him. His memoir, however, is a model of such investigations, and will be read with interest by those who are curious about the question of which it treats.*

The same Journal (vol. 6, p. 401), contains an interesting paper, by Dr. Drake, the title of which is, "The Northern Lakes, a Summer resort for Invalids of the South." Its suggestions are judicious and important. It is written with the freshness of a traveler who had beheld the charming scenery he describes, and with the sagacity and judgment, of an able, experienced physician.

In 1843 Dr. Drake engaged with a number of friends in the investigation of the phenomena of Mesmerism, which, at that time, was exciting great interest in Louisville. The point to which his attention was particularly directed was *clairvoyance.* In order to test the reality of this alleged faculty, he arranged that several gentlemen should write down a series of topics to be presented to the "subject" when in the mesmeric state, by reference to which, the answers being recorded, it would be seen whether the person mesmerized had before his mind the objects in the mind of the individual "in relation" with him. The test was fair, and at the same time decisive. The result was a conviction on the part of the majority of the committee, that there was no remarkable coincidence between the answers of the "subject" and the objects in the mind of the questioner. Dr. Drake published a detailed account of the inquiry under the head of "Analytical Report of a Series of Experiments in Mesmeric Somnambulism."* It will, perhaps, strike the reader as tedious, but it is conclusive of the question. The experiments proved that all was guess beyond what was suggested to the mind of the "subject" by the individual asking the questions. This Dr. Drake exhibited most clearly in a subsequent paper on the subject, entitled "Speculations on the Facts presented in the Analytical Report on Mesmeric Somnambulism." He shows in this article that a large proportion of the answers returned were not correct, that many were vague, and that those which seemed to favor the idea of clairvoyance were suggested by the question proposed. We have rarely read a paper displaying greater mental acumen than this, and we could not point to one which exhibits more of the peculiar traits of the author's mind. It will be found to contain the germ of the true theory of all those phenomena occurring in the conditions variously styled "clairvoyance," "biology," hypnotism," &c. The explanation is, briefly, that the mind of the individual in the mesmeric state is in a peculiarly ductile condition, and may be directed, at will, by the person who may chance to have his ear when he passes into this state; or, as explained by Dr. Carpenter, he is a "thinking automaton," having no will of his own, but being completely under the guidance of the person in relation with him. Whatever the questioner sees, a word will cause the "subject" to see. But we need not go into a fuller explanation. We have said this much because at the time when Dr. Drake submitted his "Speculations" to the profession, the subject was very imperfectly understood, and he has the credit of having discovered the clue to phenomena which, to many highly cultivated minds, appeared mysterious and wonderful.

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* See Western Journal Med. and Surg., vol. iii.

In 1850 appeared his great work on the Principal Diseases of the Interior Valley of North America,† a work which he had meditated for forty years. As long ago as 1823 he issued a printed circular to the physicians of the South-west, announcing his purpose to write a work on the diseases of the Ohio Valley, and soliciting the contribution of results afforded by their experience and observation. Engaged as he has been since in the labors of practice, and engrossed by the politics of medical schools, he has never lost sight of this noble enterprise. Amid all the changes through which he passed in the Medical Colleges of three States, his plans in regard to this great labor of his life have remained unaltered. The institution founded by his exertions in early life in the city which he loved, the image of which has pursued him in all his subsequent journeyings, and made him restless and dissatisfied in every other institution with which he has been connected—an image beckoning him still to return to his early home, and disappointing him still as often as he yielded to its importunity—has never been able to divert his thoughts from this cherished object. It shows great steadiness of purpose that, amid every distracting care and throughout the unquiet life of the most active of medical politicians, the plan of his book was kept constantly before his mind. It is fortunate for his fame that these exciting concerns never wholly engrossed his thoughts.

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* Western Jour. Med. and Surg., new series, vol. i., p. 189.

† A Systematic Treatise, Historical, Etiological and Practical, on the Principal Diseases of the Interior Valley of North America, as they appear in the Caucasian, African, Indian and Esquimaux varieties of its population.

About nine years before his work appeared he set earnestly about collecting materials for its composition, by exploring personally the great region of which it was to treat. Connected at the time with the Medical Institute at Louisville, and not disposed any longer to engage actively in the practice of physic, he enjoyed in the long vacation of the school the leisure necessary to the extended journeys required by the arduous enterprise. In the spring of 1841 he commenced a series of excursions in which he visited a wide area of country on the Mississippi, Ohio, Alabama, Tennessee, Missouri and St. Lawrence rivers, from the Balize to the Indian territory in Missouri, and from Pensacola Bay to Lake Superior. In the course of his travels he sought out the medical men every where, and collected their observations respecting the diseases of their several countries. It was his purpose to see the Great Valley in all its aspects, and its population in all its varieties and grades of civilization. He saw men in Barracks and in Indian wigwams, and made observations on the Caucasian, the African, the Indian, and the Esquimaux. And in addition to all this, he has availed himself of the observations of other travelers in remote parts of the Valley not explored by himself, thus embracing in his treatise the medical topography of the country from Vera Cruz to the regions around Hudson Bay.

It was to produce a work on the diseases of the Interior Valley out of materials collected in the region where they prevailed, that Dr. Drake was making preparation through this long period and by this extended travel. He never thought of framing a treatise out of other books. He meant that his work should be indigenous. No blind advocate of sectional medicine, he had yet observed enough to convince him that diseases were modified, to some extent, by the countries in which they prevailed. "That many physicians," says he, "overrate the degree of variation from a common standard which the diseases of different countries present, I am quite convinced ; but feel equally assured that if the maladies of each country are studied and described without reference to those of any other, it would be found, if the state of medical science were equal in them, that the works thus produced would not be commutable, but that each would be better adapted, as a book of etiology, diagnosis and practice, to the profession and people among which it was written, than to any other."* It was his design to ascertain how far the diseases of the Interior Valley differed from the same affections as described by writers elsewhere, and to make his work faithfully reflect these diversities.

The causes that go to modify disease are soil, climate, and population. Dr. Drake discusses these subjects at great length, four-fifths of his great volume being occupied with their consideration. Many have expressed regret that he should have given such prominence to etiology in a work designed for practical men ; but to have given it less space, or to have detached it from his treatise on the diseases of the West, as many would prefer that he should have done, would have been to abandon one of his most cherished ideas. He believed that the range of professional studies in our country was too limited, and it was his purpose to show, in this work, the full bearing of etiology upon practical medicine. He has presented the most extended system of medical topography to be found in any work extant. In accumulating and digesting this huge mass of details he was well aware that, for the majority of medical men, he was performing a profitless and thankless labor. He foresaw that by the many his design would not be understood. But it was his theory of medical science, and no fear that his book would be less popular interfered with his putting it into practice.

As among the elements of Etiology, he begins with the mineral geology of the various regions described, holding that this is the proper basis of medical topography. It is well understood that the character of surface influences materially the health of a country, but no writer has indicated so clearly the relations of geological to medical science as Dr. Drake has done in this treatise.

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* Introd. Interior Valley.

He devotes two hundred pages of his work to the climate of this great intramontane plane. And finally he presents a comprehensive view of its hygiene, or physiological and social etiology. He treats the subject not in a general way, but with special reference to our own population, the facts and conclusions having been derived from the author's own observation. As the climate of every country possesses something peculiar, so there are peculiarities in the hygienic condition of every people; and in one element at least the population of the Great Valley stands more conspicuously than any other people upon earth; for where else, as Dr. Drake has pointed out, was there ever before such a commingling of races? Four out of five of the grand varieties of the human family are here—the Caucasian, African, Indian and Mongolian; and we have every branch of that family which stands first among the races—English, Irish, French, Italian, German, Scotch, Spaniard, Pole, Norwegian, Swiss, Swede, Hollander, Welch, and Jew, united here to form one great Caucasian family. For a century they have been mingling with each other and with the aborigines of the country, and the process of amalgamation which has been going on among men from the earliest ages, as shown by Dr. Drake, must go on in an accelerated ratio and here attain its final consummation.

"The great Central Valley of North America is the best crucible into which living materials, in great and diversified streams, can be poured for amalgamation. The double range of mountains which separate it from the Pacific Ocean, leave too little space for empire on that sea; and the detached communities which may there grow up, will be but deviations from the homogeneous millions, with which time will people the great region of the Appalachian and Rocky Mountains, which is thus destined to present the last and greatest development of society."

Such are the broad, philosophical views in which this treatise of Dr. Drake abounds. This work is no compilation; it is no mere technical treatise on disease, but a scientific account of the characteristics of the great West, geological, ethnological, sanitary and climatorial.

The gifted author had the second volume of his treatise nearly ready for the press when summoned away from the scene of his earthly labors. His last published work was a small volume consisting of two Discourses, delivered before the Cincinnati Medical Library Association, in January, 1852. In the first of these he gives a biographical sketch of the early physicians of Cincinnati, with some incidents in his own eventful life; the subject of the second discourse is "Medical Journals and Libraries," of the rise of which he presents an interesting history.

The style of the first is light and sketchy, adapted to the simple annals which it was the purpose of the discourse to record. The second discourse abounds in fine reflections. In the following remarks, so full of the true spirit of philosophy and glowing with poetical beauty, the author might be supposed to be giving a description of himself:

"The enlightened aspirant for medical distinction is but little taken with the applause of the present moment, unless he perceives that after it has passed away there will remain some enduring element of fame—some solid and undecaying trunk, with fruit-bearing branches, which might have been overspread and hidden by a gorgeous drapery of leaves and flowers that enraptured the gazing populace for a day, but had no charms for him. When we feel in our hearts this indifference to the fleeting, and this warm regard for the permanent, let us believe that God has implanted the instinct for a wise and good purpose; and then follow it as a heavenly guide."

And again—in speaking of that class of medical works to which his own treatise confessedly belongs, he says:

"The true and healthful bibliothecal element of the mind consists of monographs, reports of original observations, and the systematic works which, in different ages, have presented the existing principles or acts of the profession, as they appeared to men of genius and experience. Such works have been at all times appearing and disappearing. They are not, like ordinary compilations, superseded by others of a later imprint, but a new generation overlooks them. They are like great men who have retired from the public gaze. They lie embalmed in the truths with which they are penetrated, and cannot decay; but like the bodies of king and philosophers, steeped in spices and deposited in catacombs, they are found only in the unfrequented closets and alcoves."

No one, we think, who will look patiently through the writings of Dr. Drake, will fail to come to the conclusion, that they are penetrated by truths which will preserve them from decay, and cause them to be referred to by the medical philosopher and historian of future times. Our belief is, that few medical writers in our country have contributed to the profession a greater number of original observations, with a smaller admixture of error. In a diligent search through all his numerous publications it would not be easy to find one hasty, much less, absurd opinion, a single groundless hypothesis, or an idle speculation. He was a cautious writer. He was slow to avow his opinions. In nothing was he ultra. As a reviewer and critic he failed, because he was afraid to use the critical power which he possessed. He seemed reluctant to condemn or contradict. He speculated but little, and was never so much in his proper element as when putting forth his own observations. He loved research and phenomena. He was satisfied with nothing but facts. His mind was acute, analytical, and logical, and if he had given himself up to it, he might have made one of the keenest of critics. It was a mind for observation and generalization, and he kept constantly up with the facts of the science, at the same time that no one surpassed him in the readiness with which he grasped and applied general principles. To sum up all in one word—*Dr. Drake was a philosopher.* He embraced in his capacious mind the whole ample range of medical science. He was eminently safe as a teacher, because he was cautious, candid, laborious and truthful. His style is uniformly simple, easy, and natural, sometimes loose and careless, but occasionally, when his subject favored it, ornate, poetical and elevated. He had an active fancy, and his powers of description were of a high order, some of his pictures being models in their way. No one who has read it can ever forget his description of a "*doctor's shop*" as he was wont to contemplate it in the days of his pupilage, and as he still occasionally encountered it in his journeys through the country. The following description of the scenery of the Lakes is full of poetical beauty. He is describing what is seen from the ruins of Fort Holmes on the Island of Mackinac, and says:

"When the observer directs his eye upon the water more than upon the land, and the day is fair, with moderate wind, he finds the surface as variable in its tints as if clothed in a robe of changeable silk. Green and blue are the governing hues, but they flow into each other with such facility and frequency, that while still contemplating a particular spot, it seems, as if by magic, transformed into another; but these mid-day beauties vanish before those of the setting sun, when the boundless horizon of lake and land seems girt round with a fiery zone of clouds, the brilliant drapery of the skies paints itself upon the surface of the waters. Brief as they are beautiful, these evening glories, like spirits of the air, quickly pass away; and the gray mantle of night warns the beholder to depart for the village, while he may yet make his way along a narrow and rocky path, beset with tufts of prickly juniper. Having refreshed himself for an hour, he may stroll out on the beach to listen to the serenade of the waters. Wave after wave will break at his feet, over the white pebbles, and return as limpid as it came. Up the straits he will see the evening star dancing on the ruffled surface, and the loose sails of the lagging schooner flapping in the fitful breeze; while the milky way—Death's Path of the red man—will dimly appear on the waters before him. Behind, in the street, a lively group of Canadian French of every shade of color between white and red, will gossip and shrug their shoulders; on one side, should the Indians, who still inhabit the shores of lake Michigan, be on a visit to the Island, he will hear the uproar of a lodge of drunken Chippeways, with the screams of women and children, and the cackling of frightened hens; on the other, will see the sober and listless Ottowa, sitting in silent vacancy of thought, on his upturned birch canoe; his wife within the tent spreading cypress bark and flag mats upon the ground, as lodgings for the night; while half a dozen children loll and play about the door, and as many half-starved dogs curl up among them. Surrounded by such scenes, the traveler begins to realize that he is a stranger; when suddenly a new phenomenon appears and fixes the conviction. Every object becomes more visible; and, raising his eyes, he beholds the heavens illuminated with an aurora borealis, where he reads in fantastic characters of strange and eccentric light, that he is, indeed, a sojourner in a strange land, and has wandered far from home and his friends in the sunny regions of the South."

Dr. Drake, as is too well known to the members of this society, died in Cincinnati, on the 6th of last November, having returned to the city of his choice, and to the school which he founded thirty-three years before. His great work was left incomplete, but in such a state that the second volume will soon be ready for the press. The presence of this eminent man at our last meeting will be remembered with interest by many who were present on that interesting occasion. We saw him there as he appeared a quarter of a century before—still vigorous, active, buoyant, full of enterprise and hope—a pleasing instance of faculties unimpaired at an advanced age.—*Western Journal of Medicine and Surgery.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Modern Treatment of Syphilitic Diseases, both primary and secondary, comprising the treatment of Constitutional and Confirmed Syphilis, by a safe and successful method. By LANGSTAN PARKER, Surgeon to the Queen's Hospital, Birmingham. From the Third and entirely re-written London edition. Philadelphia: Blanchard and Lee. Pp. 216. For sale by Riley & Co.

The above work, according to the author's testimony, is the result of observations in hospital and private practice, continued through a period of twenty years. In private practice alone, he states that he has treated over eight thousand cases.

From such opportunities for becoming acquainted with the disease, we would infer that the author's effort was no abortion. A perusal, however, of the work itself, will convince any one that it is one of merit, notwithstanding the vast amount of matter of a similar character, which has of late emanated from Vidal, Ricord and other syphilographers.

As is well known, John Hunter laid the foundation, in his Treatise in 1786, of most of the doctrines that now pertain to the pathology and treatment of syphilis. He regarded syphilis and gonorrhœa as varieties of the same disease. His list of remedies was very short. Mercury, with him, was the grand panacea for both forms of the disease. To apply it externally, and to administer it internally, until the system was saturated, was his practice. Hunter proved, by inoculation, the existence of a specific, morbid, animal poison, which doctrine has been espoused in the present day by Ricord and others. Strange as it may appear, this doctrine, or rather the facts of Hunter, have been denied, and all the phenomena of the disease attributed to "*syphilitic irritation.*" This was the doctrine of the physiological school of France. Having about the same amount of truth in it that characterized the speculations of the founder of that system, with regard to things in general, it, like all the rest, enjoyed but an ephemeral reputation.

Dr. Carmichael taught rather a mixed doctrine. He supposed many primary sexual ulcers due to a specific virus, such as that for which Hunter contended; while, on the other hand, he thought he observed others that were due to the ordinary forms of irritation. Carmichael first drew the attention of the profession to the treatment of syphilis, without the use of mercury to the extent recommended by Hunter. In the constitutional forms, when the papular and pustular eruptions became scaly, he occasionally administered "*alterative doses*." His reliance, however, was mostly on sarsaparilla, antimony, and the hyd. of potass. This practice has met the approbation of a great number of those whose opportunities for testing different methods have been very good. That much injury has been done by the too profuse and indiscriminate use of mercurials, there is not the least doubt; and that the disease will yield in the great majority of cases to antimony, hydriodate of potass., sarsaparilla, etc., there is now no doubt. It is well known that, in Sweden and Denmark, venereal diseases are treated on a plan called the "*cura famis;*" a plan in which diet alone is the remedy invoked. In favor of even this, there is much said by its advocates. This proves that many cases will result in a spontaneous recovery, without the use of drugs of any kind.

It hence becomes a fact, that syphilis can be scientifically treated, with mercury, or without it. A few cases require it, while, perhaps, the majority can be more safely managed with other things, less dangerous to the system.

The greatest property of a drug is, not that it will cure, but that it will cure *safely*. Mercury will undoubtedly cure syphilis, but it will also occasionally leave effects upon the system, that are worse than the disease it cured. In other words, "its wear and tear" is too great to be used without the greatest possible care; and when its place can be supplied by anything else, against which such objections do not apply, it is the duty of the practitioner to do it.

Much testimony might be cited in favor of the non-mercurial plan of treating syphilis, while in the primary form. Deswelles made observations on 8810 patients, treated without mercury, and he says the plan must be considered as the basis of all rational practice; but, he says, should the ulcers continue without disposition to heal, for twenty or thirty days, mercury should be employed to effect a cure. This, also, is the result of the experience of our author, drawn from the personal treatment and examination of 25,000 patients, in hospital and private practice.

The plan which the author pursues is, rest, low diet, mild opiate, and astringent washes—nitrate of silver, or sulphate of copper, cathartics, antimonials, etc.

The circumstances which, in his estimation, justify a resort to mercurials, are : 1. When a sore remains long open, and shows no disposition to heal. 2. When secondary symptoms appear before the primary form is cured. 3. In well marked indurated chancre—more especially, if this has been tested by inoculation. 4. In certain cases of rapidly spreading ulceration.

From what we have noticed, it must be evident that the work before us, although not by any means voluminous, must nevertheless be regarded as a judicious summary of what is most approved in regard to the pathology and treatment of syphilis, a disease now more common than small-pox, and characterized with ten times the amount of deterioration to the organism and its offspring.

Lectures on the Diseases of Infancy and Childhood. By Charles West, M. D., Fellow of the Royal College of Physicians, Physician to the Hospital for Sick Children, etc., etc. Second American from the Second Enlarged London Edition. Philadelphia: Blanchard & Lea. 1854. Pp. 476.

This work was sent to us by the Publishers some time since, and we intended by deferring any thing more than a notice of it, which was made at the time, to extract some of the more useful parts for the readers of the Journal. We find it, however, still impossible to do this, and merely call attention to it again, from a conviction that it is a work of merit.

The substance of the lectures was addressed to the pupils in Middlesex Hospital, in the summer of 1847. The observations were made in the large field presented by the Children's Infirmary, which was thrown open to the author in the year 1839. In 1842 the author assumed the entire medical control of the Institution, and he states by these arrangements that something near 14,000 children were treated in a period of nine years.

In getting up the second edition, the whole work has been carefully revised, and some additions made, the latter amounting to about fifty pages. Among other things, the present edition contains 199 post mortem examinations.

Among other subjects treated of in the work before us, is Inflammation of the Mouth—Stomatitis. We insert the following remarks as being practical in their character:

"Among the local accidents which complicate dentition, we noticed a condition of the mucous membrane of the mouth, which, though not attended by serious danger, is often the source of much suffering to the patient.

"Inflammation of the mouth, however, is an occurrence by no means confined to the period of teething, but it comes on in children of all ages, assumes very different forms, and leads to very different results in one case from those which characterize it in another. The mucous follicles of the mouth are the chief seat of the disease in one case, the substance of the gum in another, that of the cheek in a third. In the first, the affection issues in the formation of several small ulcers, which heal eventually of their own accord; in the second, an unhealthy process of ulceration destroys the gums and denudes the teeth, but it is tardy in its advance, and tends to a spontaneous cure; while, in the last, mortification involves all the tissues of the cheek, and spreads with a rapidity which remedies generally fail to check, and which is arrested at last only by the patient's death.

"Each of these varieties of *stomatitis* requires from us more than a passing notice.

"The first—the *follicular stomatitis* of some writers, the *apthous stomatitis* of others—is not met with either as a concomitant or sequela of measles, or as an idiopathic affection. In the former case it depends on the extension to the mouth of a state of inflammation similar to that which gives rise to the eruption on the skin; in the latter, it is often associated with obvious gastric or intestinal disorder. Under either of these conditions it is rare after five years of age; and though it often depends on causes quite independent of dentition, yet from the period when teething has commenced, to the end of the third year, is the time of its most common occurrence. When it constitutes an idiopathic affection, more or less fever, and restlessness, loss of appetite, and unhealthy state of the evacuations, and frequently a relaxed condition of the bowels, precede the local ailment for several days. Attention is generally called to the state of the mouth, by the child being observed to suck, or take food, with manifest pain and difficulty; while at the same time the secretion of saliva is greatly increased, and the sub-maxillary glands are swollen and tender. The mouth is hot, its mucous membrane generally of a livid red, while a coat of thin mucus covers the center of the tongue. On the surface of the tongue, especially near its tip, on the inside of the lips, particularly on the lower lip and about its fold, on the inside of the cheek, near the angles of the mouth, and less often in other localities also, may be seen several small isolated transparent vesicles, or the ulcers which, after bursting, they leave behind. The ulcers are small, of a round or oval form, not very deep, but having sharply-cut edges; and their surface is covered by a yellowish-white, firmly adhering slough. When attention is first directed to the mouth, several of these small ulcerations usually exist, for the vesicular stage of the affection appears to be generally very short, while the ulcers are indolent, and sometimes continue for many days without showing any disposition to heal or to increase in size. The eruption of a single crop of vesicles, and the change of these vesicles into minute ulcerations, that heal in the course of time, do not complete the history of this affection, for while the mucous membrane in the situation of some of these ulcers at length resumes its natural condition, other vesicles appear, which again degenerate into little ulcers, and thus keep up the ailment, sometimes for weeks together. In some cases, not above five or six of these little ulcers exist at once, or they may even be less numerous, while it is very seldom that more than fifteen or twenty of them are observable at one time. By the successive appearance of fresh ulcerations, and the coalescence of several, an ulcerated strip of considerable extent sometimes forms, especially at the tip of the tongue, or on the lower lip. When the ulcers are healing no change in their aspect is observable, and they continue to the last covered by the same yellow slough, but by degrees they diminish in size; and seldom or never is any cicatrix observable in the situation which they occupied. In some cases the affection is complicated with a herpetic eruption about the edges of the lips, the vesicles of which degenerate into ulcerations similar to those observed in the interior of the mouth, and by their soreness add very much to the sufferings of the patient."

"Even though no remedies be employed, this affection shows no tendency to rapid increase, neither is it, in general, associated with any disposition to the formation of false membrane in the mouth, still less with any tendency to gangrene. It is sometimes a source of much annoyance to the child, but need never excite any serious solicitude, except when it occurs as a sequela of measles. In that case, however, as was observed some days ago, it occasionally becomes associated with diptheritic deposits on the fauces, and with ulcerative inflammation of the larynx, though our anxiety is then excited less by the affection itself than by its concomitants."

"In the *treatment* of this affection, our attention must be chiefly directed to correcting the gastric and intestinal disorder by which it is accompanied; and when this object has been attained, the local ailment in many cases speedily subsides. The borax lotion mentioned in the last lecture is one of the best local applications that can be used; but if the ulcerations show no tendency to heal, it may be desirable to touch them once or twice a day with a solution of five grains of nitrate of silver in an ounce of distilled water."

"Between the mild affection we have just been studying, and the *second form of stomatitis,* to the examination of which we are now about to pass, there are comparatively few points of resemblance. This variety of the disease attacks the gums, and sometimes destroys them extensively, unlike the former ailment, which, even though it should continue long, seldom occasions any actual loss of substance. The process, however, by which the destruction of the gums is accomplished is one of ulceration, not of mortification—a fact which is of importance to bear in mind, lest we should fall into the error of some observers, who have confounded together under the name of Cancrum Oris, both this affection and that more formidable malady, true gangrene of the mouth. To preserve the distinction between the two diseases, it may be well, following the example of some writers, to apply to the former the designation of *ulcerative stomatitis,* or *Noma,* and to the latter that of gangrenous stomatitis, or gangrene of the mouth.

"It is by no means a constant occurrence for any special derangement of the general health to precede the attack of *ulcerative stomatitis,* though the children who are affected by it are seldom robust, and in many instances are such as have suffered from deficient food, or damp, unhealthy lodgings, or both. In children who are not very carefully tended, the ulceration has sometimes made considerable progress before its existence is suspected, and the profuse flow of saliva, or the offensive smell of the breath, is the circumstance which at length excites attention. Coupled with these symptoms, too, there is often considerable swelling of the upper lip, and the sub-maxillary glands are frequently swollen and painful. On opening the mouth, the gums are seen to be red, and swollen and spongy, and their edge is covered with a dirty white, or grayish, pultaceous deposit, on removing which their surface is exposed, raw, and bleeding. At first, only the front of the gum is thus affected ; but as the disease advances, it creeps round between the teeth to their posterior surface, and then destroys the gum both in front and behind them, leaves them denuded, and very loose in their sockets ; but it is not often that they actually fall out. The gums of the incisor teeth are usually first affected : those of the lower jaw more frequently and more extensively than those of the upper ; but if the disease be severe, the gums at the side of the mouth become likewise involved, though it is seldom that the two sides suffer equally. Sometimes apthous ulcers, like those of follicular stomatitis, are seen on the inside of the mouth in connection with this state of the gums ; but oftener it exists alone. On those parts of the lips and cheeks, however, which are opposite to, and consequently in contact with, the ulcerated gums, irregular ulcerations form, which are covered with a pultaceous pseudo-membranous deposit, similar to that which exists on the gums themselves. Sometimes, too, deposits of false membrane take place on other parts of the inside of the mouth, the surface beneath being red, spongy, and bleeding, though not distinctly ulcerated. If the disease be severe and long-continued, the tongue assumes a sodden appearance, and is indented by the teeth, and the cheek, on one or other side, is somewhat swollen, while the saliva, though rather less abundantly secreted than at the commencement of the affection, continues horribly fœtid, and is often streaked with blood, the gums themselves bleeding on the slightest touch. But even if left alone, the affection usually subsides in the course of time, though it may continue almost stationary for days or weeks together, and this notwithstanding that the general health is tolerably good. It would be too much to say that this unhealthy ulceration never degenerates into gangrene : but though a very large number of cases of ulcerative stomatitis have come under my notice, I have seen only one instance in which it was succeeded by true gangrene of the mouth. When recovery has commenced, the disease ceases to spread ; the driveling of fœtid saliva diminishes ; the white pultaceous deposit on the gums, or on the ulcerations of the cheek or lips, becomes less abundant ; the ulcers themselves grow smaller ; and finally, the gums become firm, and their edges of a bright red, though still for a long time showing a disposition to become once more the seat of the ulcerative process, and continuing for a little longer time to cover the teeth but very imperfectly.

"Various internal remedies and local applications have been at different times recommended for the *cure of this affection.* Tonics have been much employed, and the supposed analogy between this state of the gums and that which exists in scurvy, has led practitioners to give the preference to remedies reputed to be possessed of antiscorbutic properties. Lotions of alum, or the burnt alum in substance, or the chloride of lime in powder, have been used locally with more or less benefit. It was my custom also to prescribe these remedies in cases of ulcerative stomatitis; but since I became acquainted with the virtues of chlorate of potash, I have learnt to rely upon it almost exclusively. It appears, indeed, almost to deserve the name of a specific in this affection; for a marked improvement seldom fails to be observed in the patient's condition after it has been administered two or three days; and in a week or ten days the cure is generally complete. Three grains every four hours, dissolved in water and sweetened, is a sufficient dose for a child three years old; and five grains every four hours is the largest quantity that I have administered to a child of eight or nine. If the bowels be constipated, a purgative should be previously administered; but there seems to be no form, nor any stage of the affection, in which the chlorate of potash is not useful. The diet should be light but nutritious, and quinine or other tonics are sometimes serviceable if the child's health should continue feeble after the local malady has been cured."

The author's remarks on the subject of *Cancrum Oris* are very sensible. Unlike Ulcerative Stomatitis, this is very rare. Except in certain localities, the practitioner seldom ever meets with *Cancrum Oris,* or as the author calls it, *Gangrenous Stomatitis.* We had the good fortune to practice ten years before coming up with a single case. In malarious districts, the influence of which on children is perhaps more deleterious than upon adults, we think the disease in question is most frequent. Indeed, every thing that exercises a debilitating effect upon the general health of children predisposes them to attacks of disease involving the same condition of the system that obtains in Cancrum Oris. Besides malarious districts, these causes are in active operation in cities densely populated, also in families and communities poorly provided with the comforts and conveniences of life. Facts of this character incline us to the opinions of the author that the complaint should be classed among those having their origin in an impoverished condition of the blood. From the circumstance that very many cases seem to happen after the health has been impaired by previous disease, such as measles, typhoid fever, ague, etc., it has been suggested that it may have an intimate relation to one or the other of these affections. This we imagine is only true so far as they operate to depress and enervate the system, thus predisposing it to all the forms of disease characterized with a want of cohesion in the solids and fluids. We insert the following from the author:

"Ulcerative stomatitis is an affection of such frequent occurrence, that many instances of it come under my notice every year, especially during the damp autumnal months; while it is attended with so little danger, that the only case which I have known to prove fatal was one in which gangrene of the mouth supervened upon it. *Gangrenous Stomatitis*, on the other hand, is a disease so rare, that I have only six times had the opportunity of witnessing it; but so fatal, that in five out of these six cases the patients died. The larger experience of other observers shows an almost equally unfavorable result, since twenty out of twenty-one cases that came under the notice of MM. Rilliet and Barthez had a fatal termination: and a recent French writer, who has collected from different sources 239 cases, which did not all occur in children, states that 176 of the number, or 75 per cent., terminated fatally. The formidable nature of the disease requires that we study it more closely than, considering the rarity of its occurrence, would otherwise be necessary; and it is the more important to do so, in order that we may avoid the not very uncommon error which confounds this dangerous affection with that comparative trifling ailment—ulcerative stomatitis."

"The constitutional disturbance which often precedes the other two affections of the mouth that we have just been studying, was seen to be generally of a trifling nature, and never so severe as to excite serious anxiety. Gangrene of the mouth, on the other hand, seldom comes on, except in children whose health has been already much impaired by previous disease, and especially by such diseases as are connected with important changes in the circulating fluid. In strict propriety, indeed, I doubt whether we ought not to remove both this and those other allied affections, in which the skin or the genital organs become the seat of gangrene, from among the class of local ailments, and refer them to the category of blood diseases.

Of twenty-nine cases of gangrene of the mouth, which MM. Rilliet and Barthez either observed themselves, or of which they found mention in the writings of other Physicians, only one appeared to be an instance of the disease in an idiopathic form; while in twelve cases it followed an attack of measles. Of the six cases which I have observed, and three of which I examined after death, two succeeded to typhoid fever, two to measles, one came on in a child whose health had been completely broken down by ague, and one supervened in a tuberculous child, who had been affected with ulcerative stomatitis, in a severe form, for many weeks. Though not confined to any one period of childhood, gangrene of the mouth is more frequent between the ages of two and five than either earlier or later. Of the six cases that came under my own observation, two were in children between two and three years old, one in a child aged three, one between four and five, one at six and a quarter, and one at eight years of age. Of the twenty-nine cases mentioned by MM. Rilliet and Barthez, nineteen occurred between two and five ; ten between six and twelve; and M. Tourdes' comparison of 102 cases between one and a half and twelve years, likewise yields the greatest number during the third and fourth years."

Here we close our notice of this book. From the specimens given it is obvious that it must rank with the No. 1 works on the diseases of children. The author shows himself on every page of the work to be a careful observer, and also to possess the faculty of distinguishing between appearances and realities, sophisms and truths.

Elkoplasty, or Anaplasty, applied to the Treatment of old Ulcers. By Frank. H. Hamilton, A. M., M. D., Professor of Surgery in the Medical Department of the University of Buffalo, &c.

The above is a part of the title of a pamphlet received a short time ago, some thirteen pages of which are devoted to the discussion of a new method of treating old Ulcers, which consists in the transplantation of a flap of integument on the site of the affected part; and the author relates a successful case in proof of its utility. The exceeding intractableness of this class of affections, and their indispositon often to yield to any mode of treatment, render it extremely desirable, that some means should be discovered or devised, which promises better hopes of success. Anaplasty seems to offer a reasonable hope, and is, at least, deserving of a trial. The author says:

"Actual loss of skin is repaired by one or both of two processes. By the development of new, from or upon the free margin of the old skin, or by the contraction of the granulations and of the cicatrix, in consequence of which the adjacent skin is drawn towards the chasm, and made, as it were, to slide over and cover it in."

"This rule admits of but few exceptions. Occasionally, after a very long delay, the granulations acquire the power of forming new skin at various and isolated points of the sore. This process may now and then be observed in the healing of extensive burns, or, perhaps, in the closing up of an ulcer whose surface is excluded from the air. New skin may even find a matrix in the periosteum, as I have witnessed, and maintained several years since. (Buffalo Medical Journal, vol. vii, p. 205.) But the conditions are very rare under which these exceptions can occur. The rule remains as we have stated, and if ulcers are not closed by either the projection of new skin from the margins of the old, or by the contractions of the granulations and cicatrix, then, usually, they must remain open. To the action of both these processes there is, however, a limit. The formative power of the old skin does not extend beyond a few lines. The new vessels, becoming more and more attenuated as they stretch inward from the periphery, lose, at length, the power of generating epithelial cells, or, if formed, they are too imperfectly organized to sustain an existence, and they crumble away from the slightest provocation. Slowly, but perceptibly, the opaque diaphragm proceeds to shut in the granulations, and for a long time encourages a hope that a cure is to be accomplished. But just when the work is almost consummated, a rapid disintegration sweeps away in a few hours the patient labor of many months. Again and again the reluctant labor is renewed, and as often suddenly and without provocation, is it arrested and broken up. At the same time the granulations have ceased to condense, and the cicatrix to contract, either because these actions have attained their natural limits, or because the adjacent skin has reached its utmost tension, and affords effectual resistance to further stretching. Here the process of closure forever ends, and the 'old ulcers of 1830 will be old ulcers in 1860.' Nature has done its utmost, and hitherto art has failed to complete the work.

"I propose to close the ulcer by an operation of anaplasty. In short, to imitate one of the processes of nature, by sliding in old skin to repair a waste, where the process of forming new skin has ceased, and been finally given up."

"If we seek to obtain this supply from the neighborhood of the ulcer, around which the skin has already reached its utmost tension, we shall only substitute one ulcer for another. We must, therefore, generally look to the opposite limb, or to the limb of some other person, for the material with which the transplantation or engrafting is to be made."

"The mode of accomplishing this, will not differ materially from that which has been generally adopted in anaplasty from remote parts, except that the ulcerated surface ought to be excised freely before the new skin is laid upon it."

"By this means I hope, not only to supply an amount of skin equal to the size of the piece transferred, but to furnish also a nucleus from which additional skin shall be formed. I hope to establish a new center of life—an oasis—from whose outer verge a true and healthy vegetation shall advance in every direction over the exhausted soil."

"It is not improbable, also, that the graft will itself expand, or be drawn centrifugally by the contraction of the surrounding granulations and cicatrix, conversely, as the skin about the ulcer had before been stretched and drawn centripetally, by a similar action of the granulations and cicatrix situated within its free margin, so that after a time, it will cover more space, independent of any actual growth, than it did originally. The opposite of this happens usually in anaplasty, and would occur here, did the flap equal or exceed the wants of the parts to be supplied. The flap would contract, thicken, and project itself above the surface. But in old ulcers, it will generally be found impossible to furnish a direct supply of integument equal to the loss. A deficiency must probably still exist, and sufficient, it is believed, to determine in the transplanted skin a necessity of expansion."

We will conclude our extracts from this paper with the following—the author's—summary:

1st. "Ulcers accompanied with extensive loss of integument, do generally refuse to heal, whatever may be the health of the body or of the limb."

2d. "Anaplasty will sometimes succeed in accomplishing a permanent cure, and especially where the health of the body and the limb are perfect, and where, by inference, the refusal to heal is alone attributable to the extent of tegumentary loss."

3d. "The graft must be brought from a part quite remote; generally from an opposite limb, or from another person."

4th. "If smaller than the chasm which it is intended to fill, the graft will grow, or project from itself new skin to supply the deficiency."

5th. "It is not improbable that the graft will expand during the process of cicatrization at its margins, but especially for a time after the cicatrization is consummated."

6th. "In consequence of one or of both of these two latter circumstances, it will not be necessary to make the graft so large as the deficiency it is intended to supply."

PART FOURTH.

EDITORIAL AND MISCELLANY.

American Medical Association.—When an individual begins to get a little up in the world, he is regarded as a proper subject of censure or praise; and, in this *free* country, where every one claims the right to exercise his taste in giving to the public his particular views, we are favored occasionally with quite a diversity, even in relation to the most common matters that are introduced to public attention.

It is not, therefore, a matter of surprise, that the American Medical Association, after having been in existence but seven years, should now be arraigned before the public, on the charge of *inutility*. We have in our country, unfortunately, a greater versatility of taste than talent. There are some among us who are orthodox in all their movements; they regard the combined judgment of the fathers in the profession, as being good authority—a safe kind of precedent—something that does very well to light up the pathway, when all around is darkness. Such persons get the benefit of the world's experience, which, added to their own, leads to wisdom—to safe and practical results. Another class, and they are not few, have a taste to eschew things generally. They imagine there is more to be made in tearing down, than in building up. It matters not how long an institution has stood, nor how well it has accomplished its purposes,—indeed, its popularity is prima facie evidence, with them, against it. The question is, has it any imperfections ; is there any objection that can be urged against it? They never stop to inquire whether or not there is any such thing as the sophism of objections, or whether there is anything in the universe against which objections may not be urged. But, guided by the delusive supposition, that perfection is attainable in everything connected with human pursuits, they seem to enjoy themselves, and imagine that they are fulfilling a noble destiny, in mustering up all the "*cons*" possible, against everything presented for public confidence.

Constituted after this fashion, individuals will have their own way. Their actions are, in a measure, automatic—in obedience to impulses over which they have but an imperfect control. They pass through life, now and then doing things to some purpose, but, in the general, are characterized with so much that is sophistical, ridiculous, and false, that it would puzzle a savan in ethnology to tell what their "chief end" was, in the creation.

To such, the American Medical Association, and all other similar organizations, possess but few, if any, attractions, and, consequently, anything that may be said in its favor, will have but little weight. With those who are disposed to consider things in a practical way, but little will be recognized in the organization of the institution to which we have alluded, or in its practical operations, to which any grave exceptions can be taken. Something of its kind was needed in our country, to get the profession together, in order to consult on the means necessary to give it concert of action, in things pertaining to its interest and usefulness. That such ends have been completely secured, no one, we presume, pretends to affirm; but that much has been done, and much more in a state of progress, all will admit, who have been at the trouble to consult the transactions of the Association. Forty thousand physicians, and two hundred and fifty professors, are not easily operated upon in the length of time the organization has been in existence, it matters not what the claims of things are, that are prescribed for their consideration. Scattered through some twenty degrees of latitude, and as many of longitude, their interests, although common in some respects, conflict in others. Besides, their plans of accomplishing the same ends would, in all probability, be various and ineffectual. To adjust, therefore, and harmonize the actions of such a body of men, require, among other things, skill and time.

That much, as already suggested, has been done by the Association, notwithstanding all the disadvantages incident to new enterprises, is very obvious. The diseases of the different sections of our country, by the reports that have been made on Practical Medicine and Epidemics, have been much discussed, and are in a very fair way, according to the present arrangement of committees, to be well elaborated. Our surgery, too, has been subjected to very rigid scrutiny, and the result must be, that it will be benefited. Who is there that can read, for instance, the "*Summary*" of Gross on *Malignant Diseases*, made to the Association in 1853, without feeling that it is a contribution to the science, in the way of purifying it from useless operations. During the same year, Meigs made a report "*On Acute and Chronic Diseases of the Neck of the Uterus*," accompanied with plates, illustrating their appearances, which, for elaborateness, has no parallel in the records of midwifery. The same year, too, Burnet contributed his "*Prize Essay*," *on The Cell; its Physiology, and Pathology, and Philosphy.* The matter of this paper is made up almost entirely from the experiments of the author. The most of it we have read—some of it *studied*— and our comparison of it with similar efforts in other countries, establishes the conviction, that it will give the author, and the Association that appreciated it, character, wherever read. But our allusion to the transactions of 1853 was accidental. The other years of the existence of the institution, although, perhaps, not equally rich, nevertheless furnish many valuable papers on subjects in which every one must feel interested.

That for which the organization was mostly got up, is the elevation of the standard of medical education. Too low, entirely too low; this has been acknowledged to be, by every one who has put himself to the trouble to investigate it. Our country has increased so rapidly in population, that the demands for medical men have heretofore been such as would seem to justify the conferring of degrees upon individuals who gave promise of usefulness, rather than evidence at the time of qualification. Such a course, continued through a series of years, it is now thought, worked injurious results to the profession and the people. The profession it "*commonized*"—

robbed it of the dignity which attaches to learning; the people it spoiled, by letting them know, practically, that the possession of a diploma is no evidence of qualification to treat diseases.

The time is now come when it it is thought best to examine into the condition of our system of education, that such changes may be made upon it, as will comport with the general progress of other things of the age. Repeatedly this matter has been brought before the Association, analyzed and discussed, and, although we are yet in the transition stage, no one can look back without seeing that we are a good way from the point of departure. Progress has been made, and all of us feel it. It only needs, therefore, that the efforts which have been commenced in such good faith, and prosecuted so far with such results, should be continued.

We did not, however, sit down to write a defense of the American Medical Association. Such a labor would be unnecessary. As a practical available instrument, for the purposes for which it has been instituted, it commends itself to the confidence of all who have the capacity to appreciate things of its character.

Like all other things in which humanity has any hand, the Association has things about it that are susceptible of improvement. Among these, is the length of time usually devoted to its annual sessions. This, experience has proven to be too short. Time should be taken to have all the reports of committees and other papers read, at length, instead of abstracts of them, as has been, and is now the custom. This is necessary, as a guard to the character of the institution, and it would be the means of provoking those kinds of discussion that "increase knowledge." Coming together from all parts of a country, having such a diversity of topographiical conditions, geological peculiarities, and climative influences, the members should have the occasion furnished them, of making a complete interchange of opinions, on all subjects of interest. Profit, socially and professionally, would be the result.

Objections have developed themselves in several quarters, with reference to the "*little frolicking,*" that has attained at the annual meetings. A *soiree*, as a Frenchman would call it, has now and then been given, by resident physicians, and it has also been the custom to have an entertainment at one of the hotels, as a kind of public demonstration of the good feeling of the profession of the place. Now, it is objected that such things take up time, that might be employed to more advantage. Well, they do take up time, but, as far as our acquaintance extends, it has generally been the time that is necessary for relaxation. The brain can't always work, no more than the stomach. It needs rest, relaxation, and what more appropriate than a social party, after the day's work is over, where all can meet together and have "a flow of soul?" For ourselves, we have no desire to see these customs, having their origin in the nature of things, abolished. They are as necessary to the institution, as social qualities are to an individual. *Esto perpetua.*

APHORISM OF HIPPOCRATES.

"Vita brevis, ars longa, occasio præceps, experientia fallax, judicium difficile."—Life is short, art long, occasion brief, experience fallacious, judgment difficult.

Such is the language of Hippocrates, the Father of Medicine, in his Aphorism No. 1. Uttered nearly four hundred years before the Christian Era, it comes down to us, not only clothed with the authority of a great name, but, what is still more, containing truths that are as imperishable as the author's name in the commonwealth of medical science. Each sentence in the Aphorism embodies enough of truth for a volume. We have no time to even comment upon any of them, much less all. The last, "*Judgment is difficult,*" we shall, however, take to serve as the basis for one or two remarks.

In the practice of medicine nothing is perhaps more frequently or more painfully realized than the truth of the remark, "Judgment is difficult." A body composed of some twenty or more *inorganic* elements, and some ten or twelve *organic*, arranged together in the forms of cells of the most delicate structure, tissues of the most complicated character, and organs of greatly diversified functions, all of which being under the influence of, and subject to, the play of the forces known as those of gravitation, cohesion, chemical attraction, and these again modified and controlled by that mysterious one known as the "*force of vitality,*" must give rise, whether in health or disease, to phenomena that, to the individual whose mission it is to repair, make "judgment difficult." Into this complicated mass of matter, often, an invisible, intangible, imponderable, inappreciable agent is introduced, which disturbs the harmonious and delicate relations, to the presence of which we apply the term *health.*

What now more difficult than to understand a derangement in matter thus complicated ? If our vocation was merely that of an artist, it might do when something gets wrong to say, with the mechanic, that a "screw is somewhere loose," or "that a wedge has dropped out of its place." This, however, might not answer the purpose, even taken in a figurative sense. One of the little cells floating in the life-current has likely come to a place where it has been accustomed to pass, and has been denied admittance—has had to tarry, to lay over for a few days ; or perhaps it has met the insidious enemy at a point where it was unexpected, and been robbed of some of its organic or inorganic elements. Again, perhaps, there has been "*a solution of continuity*" in some of the fibres of the tissues in the deep-seated parts of the body. Or, perhaps the foreign agent has come in contact with an organ, imparting to it unnatural activity, or what is just as likely, it has disarmed the organ of the ability to act at all. Now how is all this—and this is but a meager specimen—to be ciphered out ? Certainly in attempting it, we are reminded of the saying of the distinguished personage to whom we have alluded—"Judgment is difficult."

Because we are unable always to be perfect in making out the exact character of the derangement, and, as a consequence, are unable to apply the proper remedy, we are upbraided often with the exclamation : "Oh, the glorious uncertainty of medical science !" "Doctors can do nothing more than divert the attention of the patient, while nature cures the disease," etc., etc. But few stop to think of the difficulties we have to encounter, in many cases, and the impenetrable mysteries that surround others. Our profession is to attempt the cure ; and, although we may succeed ninety and nine times in the one hundred, still a failure in the other case is often a sufficient cause of reproach ! "Why not cure all ?" is the unreasonable inquiry. It would not be a sufficient offset to such demands to say that the moralist cannot cure all disposed to be vicious and corrupt ; or that the lawyer cannot gain all his cases in court ; or that the mechanic cannot mend all the broken machines ; or that the chemist cannot analyze all the substances supposed to be compound ; or that the astronomer cannot always predict the appearance of the comet ; or that the geologist cannot come within a thousand years of the age of the world ; or that the mathematician does not yet fully understand the capacity of the nine digits ; or that the philologist is in the infancy of his knowledge concerning the power of letters ; or that, in short, we are yet but upon the threshold of all science, imperfect in all our efforts, it matters little what is up for investigation—such replies, we repeat, would in no way extenuate, in the estimation of the many, our imagined imperfections. Such being the case, what course is left for us to pursue? Are we to sit down and pare our finger-nails, in order to kill time, mourning over the want in the public mind of qualities it ought to posses, or make renewed efforts to confer a greater degree of certainty on every thing connected with our vocation? Are we to sit down and abandon the interests of our profession to the results of chance, because preachers, lawyers, poets, etc., etc., are found mustering with the quacks and charlatans of the day? The profession, we think, would universally give to such inquiries a negative response. In looking over the record, we find that we have made progress in every age, and in none more than the present. The truth is, however, that we have in charge the most difficult science, or, rather, series of sciences, with which our race has had any thing to do; and this fact, if properly appreciated by the great mass of our profession, would work out salutary results. It would stimulate to increased exertion. There is scarcely an individual but what might double the amount of labor he is performing, to make himself and others acquainted with the fields yet unexplored. This applies eminently to the young men scattered over the country, many of whom are in regions that abound in facts, which, if carefully collected and arranged, would perhaps untie a knot that has bothered all the men in the profession from Hippocrates to the present day. Indeed, there is no locality where disease occurs, but what contains much that would be useful, if rightly observed and recorded. The chemists are at work in the laboratory, and they are making developments that give increased certainty to our science; the pathological anatomists are at their posts, examining the tracks of disease on the organism, and why should not medical men, engaged in the practical parts of the profession, be equally industrious in their observations? The departments of the last are Etiology and Therapeutics—subjects in much need of investigation. If, therefore, all would labor, the time may yet come when we would not feel so pungently the force and truth of the sentence, "judgment is difficult."

In conclusion, we say to the readers of the Journal, write out your observations of interesting cases, epidemics, etc., and forward to us for publication.

Case of Rheumatism.—I was called (July 12th) to see T. B——, æt. 23 years, of lymphatic temperament. resides in Wyaconda tp., Clark county. Learned that he had been subject to frequent attacks of rheumatism in his feet and ankles for some six years, which at times became so severe as to render his lower extremities almost useless.

During the latter part of last fall rheumatic symptoms began to develop themselves in other parts of the body. His shoulders, neck, elbows and wrists fell victims to its strong hold. Finally it developed itself in his back, hips and knees. It gradually grew worse, and about the middle of January he was compelled to take his bed, which he was still occupying when I saw him.

Found him greatly emaciated. Feet and legs anasarcous. Pain and soreness has left his neck and shoulders, and appeared to be permanently located in his elbows, wrists, back, and lower extremities. Subject to profuse acid sweats. Sleeps but little at night, and is unable to turn himself in bed: the least motion of his body causing the most excruciating pain. Finally, found him entirely helpless, requiring more nursing than a new born infant.

Treatment.—Applied Electro-Galvanic Battery; combined equal parts of Vinum Colchici and Am. Tinct. Guiac., order half a teaspoonful of this to be given ter die; the parts affected to be bathed with a liniment composed of Ol. Organum, Olive Oil, Turpentine, Tinct. Guiac, Tinct. Camphor, and Aqua Ammo. The body to be sponged once a day with Hydro-chloric Acid, diluted to the strength of weak vinegar. Ordered gr. 10 Pul. Dover's to be given at night.

July 16th. Found swelling of feet and legs somewhat subsided; rests better at night; sweats also diminished. Applied bathing and ordered the other remedies to be used as above directed.

July 19th. Patient better; swelling greatly subsided; sweats but little; pain and soreness of joints also diminished; rests much better at night; can turn himself in bed.

July 24th. Still rapidly improving; swelling almost gone; pains and soreness greatly relieved; sleeps well at night; can get out of bed without assistance; Discontinued use of Dover's Powders.

July 31st. Patient doing well; pains and soreness has almost left his joints. From this time he convalesced steadily and rapidly, and is now (Aug. 24th) able to walk about and go on his way rejoicing. I would further add that this young man had been treated by several physicians, but without the benefit. I ascribe his rapid recovery to the effects of the Guiac and Colchicum.

Waterloo, Mo. C. Chapman.

Starling Medical College.—This Institution commenced its session on the 18th ultimo, and will continue its operations for five months.

The present faculty expect to spare no pains in trying to place this school, so far as every thing relating to a medical education is concerned, among the best in the nation. With material for clinical instruction amply sufficient; with subjects and facilities for the prosecution of anatomical studies in abundance; with a college building which for elegance and the purposes designed, is not excelled in the world; with a Faculty united, full of zeal, and bound to succeed, the results, to those who adopt this school as their *Alma Mater*, must be eminently satisfactory.

Receipts.—We commence in this No. of the Journal to publish receipts. This seems necessary in order to satisfy subscribers that their remittances have come to hand, and it will dispense with the labor of doing it by letter, as has been hitherto the custom, to some extent, with the former conductors of the Journal.

The following are the receipts not otherwise acknowledged since our last issue:

Dr. C. Olds, $5; J. N. Lindley, $2; J. P. Henderson, $2; J. L. Beebout, $2; A. Plumbley, $2; C. H. Spahr, $2; A. E. Bell, $2; J. W. Scott, $2; J. Ware, $2; J. McCallen, $2; R. R. McElvaine, $1,25; J. W. Forshee, $2; W. A. Johns, $2; V. D. Brownell, $2; J. A. Potts, $2; Jared Fuller, $2; Park Bremer, $4; R. C. Bowdish, $4; J. R. Conner, $2; S. A. Morton, $2; W. T. Sharp, $2; C. T. McKenley, $2; Pickering, $2,30.

Bullock & Crenshaw's Catalogue.—We call attention to the Catalogue of Drugs and Medicinal Wares, by Bullock & Crenshaw, N. E. Cor. Arch and Sixth Sts., Philadelphia. See advertisement.

More Subscribers.—If each one of the patrons of the Journal would take a little extra interest in its welfare, a pretty considerable addition to our subscription list might be easily made, and we imagine all parties benefited. The design is to spread information, and, of course, the greater the theater, the more successfully this can be accomplished. We hope, therefore, our friends will find it convenient to use their influence in obtaining for us some new subscribers ; the more light, the better for us all. Nothing that we can do shall be wanting, to make the Journal the vehicle of everything that is of utility in medicines and diseases.

OBITUARY.

Died, at his residence in Moscow, Clermont county, O., on the 7th of August, of cholera, John H. Moore, M. D. Aged 33 years.

The deceased was a graduate of Starling Medical College, and was never known to shrink from the dangers and responsibilities of his chosen profession. He had been, for some days previous to his decease, in almost constant attendance on cholera cases—himself unwell at the time, with disarrangement of the bowels, and when entreated by friends to not risk his own life, his reply was characteristic of the man: "My services are needed, my promises given, and when I die, I wish to die at my post!" He died the death of a Christian—resigned to God's will, and deeply lamented, as a relative, friend, and physician, by the community in which he dwelt. He has passed from among us, but we bless God for the assurance that "this, our brother, is not dead, but sleepeth—that he will rise again." A. C. M.

Death of Dr. John Steele.—This gentleman died at his residence in Dayton, on the 25th ult., after a protracted illness. With Dr. Steele we were not much personally acquainted. We have known him by reputation for a number of years. He was a graduate of the the University of Penn, and was a pupil of the institution during the time that Physic, Rush, and Wistar were connected with it. Possessed of a good education, and a good class of feelings, he did much to give character to the medical profession in his locality, and was generally esteemed by those who best knew him. We hope some one intimately acquainted with him, will furnish us with a biographical notice, for he deserves it.

Professor Sandford B. Hunt.—We are much gratified to learn that this gentleman has been elected to the chair of Anatomy in the Medical Department of the University of Buffalo, rendered vacant by the resignation of Professor Moore, who is about to remove from this city, and take the chair of Surgery in Starling Medical College. To the members of the profession Dr. Hunt is widely and favorably known by his writings in the Buffalo Medical Journal, of which he was one of its two editors. He is also one of the contributors to Putnam's Magazine, and the frequency with which his articles are taken from that periodical and published in the various journals, evinces the estimation in which his talents are held by the reading public.—*Buffalo News.*

Illustrated Catalogue.—This is a cataloge of Medical, Surgical and Scientific publications of the extensive publishing house of Blanchard & Lea. It can be had of all Booksellers throughout the United States and Canada. Physicians and Merchants wishing to order books will find this Catalogue a very useful reference.

Prize Essay.—We publish this paper of Dr. Wright's, because it is one of practical utility—will well pay the perusal of those who have any thing to do with Obstetric Practice.

S. E. SAMUEL & CO.,

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In the cities of New York and Philadelphia, and we feel confident will give satisfaction to Physicians and others who may favor us with a call.

Columbus, October 25, 1854.

MEDICAL AND SURGICAL JOURNAL ADVERTISER.

STARLING HALL

EMBRACES THE CENTRAL PORTION AND WEST WING of the edifice represented in the opposite engraving, and was originally designed by its founder, the late LYNE STARLING, Esq., for hospital purposes.

The building has been constructed and furnished with special reference to the comfort and convenience of its inmates, and is now open for the treatment of persons afflicted with any and every variety of *chronic diseases*, susceptible of cure or relief, irrespective of age or sex.

SURGERY.—In the department of Surgery, the ablest counsel, and most competent skill that can be procured, will be made available in every critical and important case.

DISEASES OF FEMALES.—A fine suit of private apartments has been supplied with baths of various kinds, and appropriated to the special accommodation of females who resort to this Institution for the treatment of diseases peculiar to their sex.

EYE AND EAR INFIRMARY.—Apartments have been comfortably and neatly furnished for the care and treatment, medical and surgical, of persons afflicted with diseases of the Eye and Ear.

Every department is abundantly supplied with water for bathing, —the cold, warm and tepid, the shower, sitz and douche baths, will always be in readiness for those who need their application.

MRS. LUCY C. PATTERSON will bestow her kind attentions as Matron of this Institution.

Starling Hall will be under the immediate medical and sanitary direction of R. J. PATTERSON, M. D., who will reside in the building and devote all needed time to the care and treatment of the inmates. F. CARTER, M. D., Professor of Obstetrics and Diseases of Women, and S. M. SMITH, M. D., Professor of Theory and Practice of Medicine, will attend as Consulting Physicians.

Physicians, as well as those afflicted, are invited to call and examine the Institution,—its fixtures, and our facilities for the treatment of disease.

All letters addressed to the undersigned, will receive prompt attention.

TERMS—For board, washing, furnished apartments, fuel, lights, nursing, and treatment, the charges will range from $6 to $10 per week.

For Surgical operations, a separate charge will be made.

R. J. PATTERSON.

STARLING HALL, Columbus, O, Aug. 17, 1854.

THE OHIO
MEDICAL AND SURGICAL JOURNAL.

Vol. 7. Columbus, January 1, 1855. No. 3.

PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. 1.—*Spermatorrhœa. A paper read before the Drake Society of the city of Columbus.* By R. N. Barr, M. D., Columbus, Ohio.

Gentlemen:—In a paper read before this association some months since, I remarked, that in looking abroad upon the wide and repulsive field of physical disease, it was a difficult matter for the young practitioner to make a selection for special investigation.

I then wrote, not for the purpose of bringing before this Society new and fanciful theories, or demonstrating facts, but for eliciting discussion and information upon a subject* that to me at least, (and I fear I was not alone,) was too little understood, both as to its pathology and therapeia. And happy am I to say, I was not disappointed in my wishes. The result of discussions at that time has been a "beacon light" to me in practice since. I now write for the same purpose and hope for the same result.

The subject chosen for present remarks, is one of which I saw or heard but little during my preparatory course, and that little was gathered almost entirely from hospital and clinical instruction and observation; but since my accession to practice, am convinced that it is fearfully common, especially in large towns and cities. Nor is it a disease of to day, produced by the licentious and erratic disposition of the present age. The close observer finds it alluded to in "Holy Writ." The earliest records of the human family furnish evidence, that even in the morning of its history, the race outraged its nature by defiling sensual vices. In the Mosaic writings we find several passages which show us that even in those primitive times and among God's chosen people, the gross crimes which in after times prevailed to such an extent in the "Imperial City" were by no means unknown. And the world, especially the medical world, has seen that the highest degree of intelligence and intellectual culture cannot redeem a people from the foulest moral leprosy—for side by side with the proudest monuments of *art*, vice and crime in their most loathsome aspect, presented themselves, and breathed foulness everywhere. And in our own day, obstinately resisting the purifying influences of the true and holy religion, human society is cursed by the prevalence of practices and vices foul, loathsome and destructive as those which mingled in the polluted rites of obscene heathen divinities. Then vileness was less disguised, men gloried in their shame. Now in secret and in darkness the destroyer taints the atmosphere and swells the number of its victims. Now "the physician is the depository of the fearful secrets of depraved human indulgence. He sees the fearful wastes that often lie beyond the boundaries which to the common eye indicates regions of flowers and sunshine—when all seems full of promise, he often can discern the canker at the heart."

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* Infantile Entero Colitis.

But let us proceed to look into the cause and effect of this *leakage*, its symptoms, its pathology, its treatment, &c. First—Its cause or causes; these are numerous and various. I believe it may depend on original constitutional debility. It may be inherited, or in the language of *Holy Writ*, it may be the iniquity of the fathers upon the children even to the third and fourth generation of them that hate him and keep not his commandments.

It may depend somewhat upon occupation. I believe I have seen a case of Spermatorrhœa produced by riding on horseback. It may be caused by Gonorrhœa. These cases, I may here remark, are the most intractable. But far the most common cause is masturbation.

In vain we scan the springs of human woe,
To find a deadlier or more cruel foe
To erring man, than this sad self-pollution,
This damning wrecker of his constitution.

In its foul march it tramples vigor down,
Darkens the soul, usurps the mental throne,
Preys upon the vitals of its filthy slave,
And drags him early to a hopeless grave.
Could this truth to all be known and foreseen,
A sea of misery would be spared the world,
And *hell's* own engine from the land be *hurled.*

The fire of heaven on *Onan* quickly fell,
Cursed was the culprit ere he sank to hell,
Brief was the period 'twixt the noxious deed
And the dread chastisement, pollution's meed.
Just as certain now as then, is the indulger undone,
Not by etherial stroke as there we see,
But equal in effect and certainty,
For death results although by slow *degree.*

An undue excitation of the genital parts, arising from excessive coition may also produce the seminal loss. The irritation persisting in the spermatic organs after the cessation of these excesses may keep up an excessive secretion of seminal matter, and give rise to precipitate ejaculations under the influence of erections that are incomplete. And finally, as to the causes, the relaxation of the ejaculatory ducts, which very soon follows inflammation or pathological irritation of the parts, produced by any cause whatever, eventually induces evacuation of the *semen* either with or without an erection—in the former case generally during a lascivious dream or a momentary excitement of a lascivious character, and in the latter case, the emission takes place during defecation or the emission of urine.

Authors speak of the different modes of spermatic evacution, and of different stages of the disease. There certainly are different modes of evacuation and different stages, but gentlemen, I believe the transition between the modes are in the vast majority of cases so insensible that it is impossible for patient or practitioner to correctly appreciate it. The same remark holds true in regard to the different stages of the disease, as laid down by Young, Lallemand, and other writers. In ten or twelve cases that have come under my observation, and of whose history I have made some notes, four of which I treated, I have not seen a single case which I could distinctly place in the first, second or third stage. The stages become so blended together, that a line of demarcation cannot be formed of the stages, distinctly separated either in theory or practice.

Pathological Anatomy has left us but few materials on this subject. The cause of this meagerness is evident. But few persons die of Spermatorrhœa as the immediate cause; but by it their nervous system becomes prostrated, thus rendering them an easy prey to any epedemic, or more vital destroying disease, which absorbs the whole attention of the pathological inquirer.

But we know beyond a doubt, that in Spermatorrhœa there is pathological irritation or inflammation of the mucous membrane of the genito-urinary apparatus. Originally this may be and doubtless is, a local trouble, but by contiguity and continuity of structure, it may extend to almost an unlimited extent, attacking and destroying the physiological action of organ after organ, until the whole animal economy becomes involved. In the onset of the disease there is an irritated or an inflamed mucous surface of the urethra in the prostatic region, extending to and involving the ejaculatory ducts; these ducts become relaxed, perhaps inflamed and ulcerated, and instead of responding to the stimulus of the sperm, flowing from the vesiculæ seminales and forced back, to be absorbed and give stimulus and strength to the system, it remains in the ducts and is forced out under the least lascivious excitement, or involuntarily during sleep or in the act of urinating or defecating. In this stage, should the patient present himself for treatment, and the Surgeon be fortunate enough to detect the true cause of the trouble, and the actual condition of things, the remedy would be easy, simple and complete. But this is seldom the case, and the beginning of the end of the trouble, difficulty, pain, and suffering, both physical and mental is not seen.

The inflammation may extend by continuity of structure through the vesiculæ seminales, involving the vasa defferentia and extending the whole length of the spermatic chord, and attack the scrotal viscera, producing epididymitis or orchitis. Or the inflammation may take another direction and attack the neck of the bladder, and pass along the ureters to the kidneys, and destroy the physiological action of these organs of vital importance, and thus involve the whole animal economy, producing a train of evils almost if not entirely, beyond the power of *medical aid.*

But in the majority of cases we think the inflammation is less progressive and less acute in its character—seldom reaching suppuration or a high degree of inflammation, but merely producing a relaxed condition of the genito-urinary apparatus, allowing a constant, teasing, enervating leakage, resulting in partial or total impotency.

Sometimes, especially if preceded or accompanied by gonorrhœa, the whole length of the urethral canal becomes inflamed, and even ulcerated, causing great pain in micturition, and tedious and painful erections, and rendering catheterism excrutiatingly painful.

Let us now proceed to examine the symptoms. These as in most other maladies, are of two classes, objective and subjective, either of which may lead the practitioner to an incorrect diagnosis.

The former are generally read in the face of the patient. The unhappy victim wears a careworn expression of countenance or he is timid and evasive, avoiding society, especially that of chaste and virtuous ladies. He is slow to answer questions and answers in monosyllables or in the fewest possible words. The white portion of his eyes is watery and of a yellowish tinge. The voice somewhat hoarse and husky, the sense of hearing, in bad cases of long standing, obtuse. There is almost universally dark, semicircular spots beneath the eyes. Some or all of the above symptoms are present in Spermatorrhœa, but none of them belong exclusively to this disease; hence, in making our diagnosis, they are not to be depended upon without the confirmation of the subjective symptoms. These are numerous, but a few will suffice. The patient will tell his medical adviser, that on arising from his bed in the morning he is not refreshed, that his sleep has been broken, that he had unhappy dreams, that he sometimes perspires freely during sleep, he has headache, bad taste in his mouth, and coated tongue. His appetite is variable, no relish for the morning meal. A little exercise fatigues him, a trembling weakness has seized upon his limbs, his bowels are torpid, and while in conversation with him he will be startled by every noise in the street or in an adjoining room. The slaming of a door or the fall of a book, a sudden touch, or even passing, or speaking to him unexpectedly, will startle him "like a guilty thing." Cowardice is a sure consequence of Spermatorrhœa. But the pathognomonic symptom is the LEAKAGE—*the Spermatorrhœa.*

But gentlemen, even in this, let us not deceive ourselves. Every spermatic looking fluid that oozes from the meatus-urinarius is not a spermatorrhœa; it may be a gleety, or a mucous discharge secreted by the mucous membrane of the urethra alone, produced by any cause that may get up an irritation or inflammation of that membrane. When the discharge is full and free, and passed during a lascivious dream or thought, or when freely passed in urinating or defecating, there is not much danger of mistaking the true character of the *fluid*, but when the leakage is small, constant, and other symptoms doubtful, chemical analysis or the microscope is the only sure test.

In connection with all the symptoms given or manifest in a case, we think the diagnosis need not be difficult. But in prognosis we must exercise great care and prudence, lest we deceive both the patient and ourselves.

As a general rule the nature of the disease is such as to render it amenable to treatment, but the character of the patient is often such as to render all treatment *abortive.* This brings us to the most difficult part of our subject. *The treatment.*—Hitherto this has been mostly in the hands of "quacks" and unprincipled pretenders, who have seduced into their clutches by their glowing advertisements of wonderful cures, the unfortunate victims, and drained them of their money as well as their "semen." Recently, however, it is coming into the hands of the regular profession where it belongs. And it becomes us to be ready to treat it scientifically at least, and successfully if we can.

There are two modes of treatment recognized by the profession—one surgical and the other therapeutical, or perhaps more correctly speaking, one local, the other constitutional. But in our opinion, he who depends exclusively on the one or the other, will find himself disappointed in the result.

It is by an ingenious and well-timed combination of both local and general treatment, that the most happy results are to be arrived at.

In the outset of our treatment the cause must be looked into and removed, else all treatment will be abortive. This is oftentimes no slight task. If there are complications, (and they are frequent,) they must be met and removed. These preliminaries having been attended to, leaves, so to speak, a clear field and an open fight.

If the case be recent, the emissions nocturnal, the patient somewhat plethoric, the constitution not much involved, and the inflammation limited to the prostatic portion of the urethra—a brisk cathartic containing aloes, on account of its derivative effect, and a half dozen leeches applied to the perineum, followed by a blister, will in a great measure reduce the inflammation. And on retiring at night, the exhibition of a drachm of spirits of camphor and two or three gr's of quinine will prevent the emission and insure a comfortable night's rest.

After the inflammation has been subdued, catheterism cautiously managed, and a proper regimen, will generally restore the organs to a state of health and functional regularity. If the catheter fails, the cautery exercised by means of *Lallemand's "Port Costique,"* will generally effect the cure. But as before remarked, we seldom see the patient until the disease has assumed a grave form. The patient will tell his medical adviser that he has both nocturnal and diurnal emissions, and sometimes without the slightest erection, or that he is perfectly impotent, that he has a heavy, dragging sensation in his loins, testicles, and thighs, that he has headache almost constantly, and that he is fast losing flesh, that he suffers great prostration, both mentally and physically, and finally, that life is a burden to him. Here too, on inquiry, we will find a variable appetite, and great constipation, urinating painful. Altogether the case is a formidable one, but not a very uncommon one. How is it to be treated? A general antiphlogestic treatment would but hurry the unfortunate victim to an already opening grave. Catheterism would be more excruciatingly painful than crucifixion, and we think useless if persisted in. The cautery is equally out of the question. Again I ask, how are we to treat such a case? Gentlemen, I give you Prof. Child's reply to the same query: "Treat it upon general principles." By this I mean to resuscitate the shaken and falling system by the most powerful tonics, and among these are cod-liver oil, sulphate of iron, gentian, quinine, quassia camphor, &c. At the same time mitigate and remove local difficulty as far as possible, by local measures, viz: cupping, leeching, and counter-irritation. These means cautiously exercised, and faithfully persevered in, will generally bring the patient into a condition for the catheter and the cautery. Of course a proper regimen is to be enforced, including bathing and exercise. But I know of no better way to give the detail of treatment, than to report a case that came under my treatment, while yet an undergraduate and a student of the late Dr. Howard.

Mr. ———, aged about 26, occupation merchant tailor, of sanguine temperament, when in health, of florid complexion, red hair, and blue eyes. The history of the case, previous to the time he came under my care is briefly as follows: In the spring of 1849 he was seized with the *Gold Mania,* and emigrated to California. He was then in perfect health, having gone through the war in Mexico unscathed—had never had gonorrhœa, though he had had frequent intercourse with "*Senoritas*" of that country. But in California he found "*timber*" of that character scarce, and prices extravagant, consequently, to use his own term, he was compelled to resort to MASTURBATION *to relieve nature of its surcharged elements.*

He practiced the brutal habit constantly for two years. At about the end of that period of time, to his great surprise he began to have nocturnal emmissions. He then, by a desperate effort of the will, abandoned the habit of self-pollution, but to his great chagrin the emissions continued and increased in frequency.

In a few months he became so enervated from the drain as to be unfit for business, and about the first of Jan. 1853, he started home on the Panama route. The sea voyage produced great constipation of the bowels, and in his straining efforts at stool, he discovered the peculiar leakage; soon after it appeared on urinating, and like an "evil spirit, it haunted him at every step—in his sleeping and waking hours."

At the time I first saw him, the least excitement would produce the emission, and by no effort of the will could he obtain sufficient erection for sexual intercourse. Nor indeed, had he the least disposition to do so. He was thin, pale, appetite poor, night's sleepless, slight cough, suffered constant pain in the head, and incapable of much exertion physical or mental.

On examination I found the whole length of the urethra tender, but the prostatic portion exceedingly so, some blood and purulent matter followed the exit of the *bougie.*

The testicles were softer and smaller than natural, and disposed to hang down so as to annoy him, and he complained of a sense of great weight in the pelvic region. Treatment.—I applied the scarifier to the perineum and by means of the suction cups drew about two oz. of blood—soon after applied to the part a blistering plaster of cantharides—took off the cuticle and kept open the sore for some days. Gave him nightly a three gr. pill composed of equal parts of camph. quinine and ext. of hyosciamus. In ten or twelve days there was a decided improvement; the emissions were much less frequent, headaches disappearing—much less urethral tenderness. I then commenced catheterism and practiced it daily, and put him upon the following:

℞ Ferri Sulphatis gr. X.
Cupri Sulphatis gr. V.
Quiniæ Di Sulphatis gr. XV.
Ext. Quassia qs. to make mass.

Divided into 2 gr. pills, of which one was taken morning and evening after eating. Also ordered a cold "*douche*" bath every morning, and the brisk use of the dumb bells ten or fifteen minutes. He was allowed no ale, wine, or *tobacco*, nor strong coffee—his diet was limited strictly to stale bread and milk, softly boiled eggs, and beef or mutton roasted, and plenty of ripe fruit. He was kept on this treatment and regimen for about two months. At the end of this time the diurnal discharge had ceased, the nocturnal not occurring oftener than once in a week. He complained of no more headache, his mind was clear, appetite much improved, and slept well. His bowels had become entirely regular. I then cauterized the prostatic portion of the urethra, using Lallemand's Caustic Holder, and changed the prescription to cod-liver oil, which he took freely; continued the same regimen. On the use of the cod oil he increased rapidly in flesh. In a fortnight I repeated the cautery. In a few days after the second cautery he left for his home, saying that he felt once more like a man, and he never again would make a beast of himself.

In about two months he returned to me saying he had the discharge about once in from two to three weeks. I cauterized him again, and recommended matrimony and the *physiological* use of the *organs.*

I heard no more of him till April last, when I received a note from him inviting me to call on him at the Capitol House in this city. I did so and found him the happy husband of a beautiful wife—"and (to his great joy,) coming events are casting their shadows before."

ART. II.—*Cancrum Oris.* By the EDITOR.

AN instance of this rare and fatal disease occurred under our observation in the month of August last. It happened to a child two years and five months old. The patient was delicate, and had but a short time previously experienced an attack of measles. As the eruption disappeared, a slight degree of soreness was developed on the inside of the mouth, on the left side. This, at first, attracted but little attention, from the fact that it was attended with diarrhœa, which was the only thing looked upon by the parents as being grave. After the lapse of about two weeks the affection in the mouth began to swell the cheek, which continued to increase until a blue spot, of about the size of half a dime in diameter, made its appearance on the cheek, near the front margin of the masseter muscle. It was at this stage of the complaint that we first saw the patient. On examining the inside of the mouth, the mucuous membrane of the gums on both jaws was found to be sloughing, and emitted a very offensive odor. The gangrenous process extended rapidly through the cheek, and spread to the left eye, the root of the nose, and upon the upper part of the neck. As it progressed the edges of the tissues involved assumed a dark, charred appearance, attended with serious offensive discharges. The patient lived about two weeks after the gangrene was developed; and at last seemed to die from the exhaustion incident to the sloughing. During the last two weeks of its illness its appetite was voracious, even when it had not the ability to direct the food with the cheeks and tongue to the esophagus.

The duration of the case was about four weeks, dating from the time that the stomatitis was first noticed.

The *treatment* was such as the books suggest. Nothing that was done, however, made the least impression on the destructive process.

Cancrum Oris is very likely to be mistaken for ptyalism, and the attending physician charged with mal-practice. We are surprised that our works on the diseases of children do not discuss the differential diagnosis more elaborately. In the first stages the two diseases may resemble each other. In their history and progress, however, there are points that assist in making out a correct diagnosis. Cancrum Oris seldom, if ever, makes its appearance in children of good constitution. It selects those of lymphatic temperament, enfeebled by poor diet, bad air, or previous disease. Ptyalism, on the contrary, is as liable to occur in children of strong, robust habits, as any other. Cancrum Oris is really a gangrenous process, characterized by a strong tendency to spread; mercurial ulcers are not so destructive on the cohesive and vital forces of the parts. Again, the black, charred dges of an ulcer connected with Cancrum Oris differ very materially from the raw, irritable ulcer in the mercurial disease; besides, the former has little, if any, sensibility; in the latter, the sensibility is apt to be exalted.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art. I.—*Report of the Committee of the American Medical Association on Medical Education, made at its last Annual Meeting in St. Louis.*

In view of the thoroughness of the discussion which the subject of medical education has heretofore undergone in the regular reports of appropriate committees, and of the reiterated expression of the sentiments of the Association, that may be regarded as exponents of the now settled opinions of the great body of the medical profession in the United States, your committee have experienced no little embarrassment in selecting topics of remark which have not already become trite from frequent repetition. The precise line of duty of a standing committee on medical education was, indeed, indicated by the constitution, but the clause which prescribed the annual appointment of such a committee, and defined its duties, was stricken out of the constitution, by a vote of the Association at the Charleston meeting in 1851; and when, at the next annual meeting held in Richmond, it was resolved "that special committees on medical education and medical literature be appointed, consisting each of five members," it was apparently the intention of the association to allow to future committees a wider latitude of discretion as to the scope and direction of their inquiries, than might have been consistent with the limitations imposed by the terms of the original law.

Under this construction of their powers, and in view of the fact just alluded to, that a very full and satisfactory body of information touching several points of interest connected with the general subject of medical education in the United States, as compared with that in other civilized countries, may be found in former reports included among the published transactions of this Association, your committee have felt themselves authorized to abstain from any further discussion of such points, and to confine their attention to "such measures, prospective or established, in reference to medical education and the reputable standing of the profession, as they may deem worthy of special consideration."

The fact being universally admitted that the ranks of the medical profession are rapidly filling with young men very inadequately qualified, either as respects native endowments or positive attainments, for assuming the fearful responsibilities of their vocation—the practical questions which, as your committee conceive, demand their especial consideration, have reference to the particular features of the existing system of medical education in America which are most instrumental in producing such a result, and to the most judicious, safe, and practicable means for remedying the evil. In the consideration of this question, the committee believe that they could not present the subject to the association in a more suitable form than by a recapitulation of the several particulars in respect to which the system of collegiate medical education in the United States has been the subject of unfavorable criticism, and by an inquiry in regard to the extent to which the measures hitherto taken by the Association have had the result of removing or lessening the defects against which they were directed.

1. Among these defects, the want of a proper preliminary education on the part of a large, we fear a constantly increasing, proportion of medical students, has received the earnest attention of the committee. To this deplorable evil, the existence of which is so easily recognized by the unprofessional community, we may justly ascribe the diminished confidence accorded to regular physicians, and the "forfeiture of social position" that has attended the loss of the homage which the profession formerly received. To the same cause may be attributed, in some degree at least, the gradual lowering of the standard of professional attainments required of the candidates for graduation; since it cannot be otherwise than that such standard should bear some relation to the average talent and

mental culture of the pupils. This subject was considered so important by the members of the national medical convention which met in New York in 1846, as to induce that body to appoint a special committee "to report on the standard of acquirements which should be exacted of young men, before being received as students of medicine." That committee addressed inquiries to thirty-six medical schools, as well as to several distinguished medical practitioners in different parts of the Union. From the answers received, it appeared that there was then no uniform standard of preparatory education exacted of medical students, but that the profession seemed to be alive to the want of such a standard, and desired one to be established by the convention. The inquiries of the committee further elicited the expression of a very considerable diversity of opinion as to the kind and extent of preparation which ought to be exacted, the standard of different writers varying from "a common school education" up to the highest collegiate attainments. The committee, in view of the want of any means of legal compulsion, thought there could be no hope of attaining any useful result by insisting upon a standard above the circumstances of the country and the times, and recommended the establishment of "a uniform standard of preliminary education for medical students, which should be of a moderate character—in the first instance too low, rather than too high—and yet of such an extent as will insure both the knowledge and the mental discipline necessary to those who would enter a profession full of labor and responsibility, without excluding meritorious young men of limited means and opportunities." They then proceeded to specify the following standard as one which might reasonably be exacted of every young man who should apply to be received as a student of medicine: "A good English education; a knowledge of natural philosophy, and the elementary mathematical sciences, including geometry and algebra, and such an acquaintance, at least, with the Latin and Greek languages, as will enable the students to appreciate the technical language of medicine, and read and write prescriptions." It must, we think, be conceded, that the standard thus recommended by the committee, and adopted by the Philadelphia convention, in May, 1847, with an evident desire to effect a gradual reform by gentle and safe methods rather than to make bold and radical changes, was in all respects moderate and reasonable. Your committee have not the data necessary for the formation and expression of a positive opinion as to the extent to which this or any other standard has been exacted of young men wishing to enter upon the study of medicine, either under private preceptors, or in collegiate classes. So far, however, as their information extends, they have reason to fear that there has been but little, if any real reform in regard to this matter during the seven years which have elapsed since the action of the Philadelpdia convention. There are, however, gratifying indications of future improvement. Thus, the report of Dr. Pitcher, at the last annual meeting of this association, makes known the fact that "it is in contemplation," by the authorities of the University of Michigan, "to exact the same preparation for admission to the medical department as is now prescribed for membership in the department of arts." At a recent meeting of the Medical Society of Virginia, held April 6th, 1854, the following resolution, offered by the retiring president, Dr. Atkinson, was unanimously adopted :

"Resolved, That the members of the society now present, do hereby pledge themselves to each other, that they will not receive under their instruction, as a student of medicine, any individual who may be grossly deficient in either mental or moral endowments, or in that preliminary education which is necessary to fit him for entering a profession requiring high intellectual and moral qualifications ; and that we respectfully and earnestly recommend to our brethren throughout the State to adopt a similar rule of action."

Your committee do not doubt that the faculties of all the most respectable schools of medicine in the Union, are truly anxious to conform to the recommendation of the association in respect to this measure of proposed reform, and would cheerfully submit to some pecuniary sacrifice, if there were a reasonable guarantee that the desired end could be thereby attained. But as the imposition of rigorous conditions of matriculation by a few of the schools will, it is believed, have no other result than to drive a large proportion of their students to such other institutions as will exact from the candidates for graduation but slender requirements of labor and of learning, it seems scarcely reasonable to hope that, under existing circumstances, the principal medical schools should adopt a policy which threatens to prove so ruinous to their interests, while it offers no compensating advantage to the profession at large.

Moreover, in some of the medical colleges the faculty is not clothed with the authority of prescribing the conditions of matriculation. This is the case with the medical department of the University of Virginia, which is owned and supported by the State. The government is lodged in the hands of a board of visitors appointed by the governor of the State ; and no member of the faculty has a voice in their deliberations. All that the faculty have to do, with reference to the point under consideration, is to dissuade young men whose preliminary education is known or believed to be defective, from entering the medical department until further and more satisfactory preparation shall have been made. In such cases the student is either transferred to some of the academic classes, or permission is granted him to withdraw entirely from the institution. In no instance has the faculty refused permission of withdrawal, with a return of tuition fees, to a recent matriculate, whose preliminary education has been shown to be defective, provided he would pledge himself not to matriculate in any other medical school until he should have duly qualified himself for the study of medicine by appropriate preliminary mental culture. If it be asked whether this system of moral suasion suffices to eliminate all the defective material of a large class of fresh matriculates, we are constrained to reply that it is far otherwise. Quite a large proportion of the members of the class in each year are very inadequately qualified for commencing their medical studies, and not a few incapable of ever becoming so.

Is there, then, no remedy for an evil which has done so much to dishonor a profession once noted for the profound and varied learning of its members ? Your committee are of opinion that it would be premature to come to so discouraging a conclusion. They do not yet abandon the position which was ably sustained by the late Dr. Parrish, in a report made to the Philadelphia convention, that "the influence of combined and harmonious action, directed to a special object, by the great body of the profession, is a power more potent than that exercised by legislatures, or by the corporations they may create." The operation of such an influence is, however, slow, and we should not be impatient if ample results are not rapidly attained. One of the instrumentalities through which it operates is gradually being brought to bear upon the solution of the difficulties which thwart the attempts that have hitherto been made to introduce this and other measures of medical reform. We allude to the organization of State and county medical societies, the manifold usages of which agencies are too obvious to require exposition.

2. A second alleged defect of the "American system" is the

shortness of the term of lectures. A resolution adopted by the convention held in Philadelphia in 1847, recommending an extension of the term, in all the medical schools, from four to six months, has been repeatedly sanctioned by the Association. A few of the schools promptly complied with this recommendation, but a part of them, as we are informed, have since found it expedient to abandon the experiment, and to resume their former practice. This fact illustrates the difficulty attending every attempt to carry out any very decided measure of reform, on the part of a few of the schools, while the majority refuse to co-operate. Unfortunately, there exists a difference of opinion as to the advantages of the proposed extension of the term. It will be remembered that the medical faculty of Harvard university, presented to the Association at its second annual meeting, held in Boston in 1849, a formal defence and advocacy of the four months' course, in preference to a more extended term. The faculty of the medical department of Pennsylvania college, in replying to a circular of the committee on medical education for the same year, appear to have taken a similar view. They assume that the "American system" of medical education consists in the instruction derived from "private preceptorship mainly," with the college and hospital as its complement;" and argue that "either we should labor to perfect that system according to its idea, or we should abandon it for another as radically wrong. Any attempt to alter or amend it, according to an essentially distinct plan, will prove a ruinous patching." They further express the "fear that the recent so-called reform agitation tends to loosen the connection of the preceptor with his pupil, and to lessen his responsibility, without adequately supplying the loss;" and contend that "such must be the effect of any considerable increase in the course of lectures." The committee do not deny that there is some plausibility in this view of the subject, and that some of the arguments advanced have force in their application to the prevalent system of medical education in this country; but they are far from acquiescing in the conclusion that no reform in this respect is needed. They would rather adopt the alternative presented in the argument last cited, and conclude a system which regards the plan for instruction by public lectures "as subordinate and subsidiary" to private instruction, as radically wrong." This system takes it for granted that even the first-course students have "read" with a private teacher prior to their attendance on lectures. But when it is borne in mind that the fundamental branches of medical science, on which the whole superstructure of professional education must rest, are precisely those which require for their proper and successful exposition, the use of such appliances of demonstration as can be supplied by public institutions alone, it will be admitted that such preparatory "reading" is not always advantageous, and may be injurious. A medical student, reading in the office of a physician residing in a rural district, cannot enjoy the advantage of studying practical anatomy. Hence, most of his reading is on the subjects of practical medicine and surgery, in which he forms the most vague and erroneous notions with regard to the structure and laws of action of the organs, the diseases of which he is studying; and such notions do not always easily give place to the simple truth, when this is subsequently presented. In cities and the larger towns, the case is admitted to be often different. There, the pupils may have access to hospitals and dissecting rooms, and there, too, organized voluntary associations of private teachers supersede, almost wholly, the old system of instruction by a single teacher. Such associations are, however, medical schools in all but the name, and thus do not, in point of fact, constitute a real exception to the principle on which we would insist. Not being entitled to confer the diploma, and basing their claims on the confidence and patronage of the more aspiring students, or the thoroughness of the instruction they offer, many of them give a more full, and especially a more practical course than is required in the regularly incorporated medical colleges. Such private schools are admitted to be most valuable auxiliaries in the cause of medical education, and are entitled, in the opinion of the committee, to an encouraging notice from the Association. It would, however, be wise, in view both of a judicious economy, and of the likelihood of thereby insuring the largest amount of practical benefit from the educational instrumentalities at the command of the American medical student, to assign to those auxiliary organizations such work only as cannot be adequately performed by the incorporated schools with larger classes,—" such as demonstrations on the part of the student, instead of the instructor, but still under his superintendence and direction;" the actual performance of surgical operations on the dead body; chemical manipulations; the use of the microscope; and clinical instruction, truly so called, which is the study of diseases at the bedside, cases being watched from commencement to end, with special attention to the use of the physical means of diagnosis in the diseases of the lungs and heart. Such instruction as this is of inestimable importance. It cannot be given by lectures alone. The student must practice for himself, under the supervision and direction of a competent teacher; and only a class of limited number can receive adequate attention from one instructor. Such instruction should, therefore, be the appropriate work of a corps of teachers auxiliary to the public schools. From its very nature it can be profitable only to advanced students. In the opinion of your committee, it should follow, rather than precede or accompany, the instruction imparted in the public schools. The latter should consist mainly in a didactic exposition of the elementary principles of the medical sciences. In this view of the subject, the committee are inclined to believe that very great advantage would result from an extension of the course of lectures to even a longer term than that heretofore recommended by the Association. In addition to the very obvious evil of crowding six or seven lectures into the compass of a single day, another striking objection to the present system lies in the fact that the practical branches of medical science are of necessity unfolded to the student before he has had an opportunity of becoming acquainted with the elementary principles upon which they are mainly based. For example, his attention is directed to, and his mind bewildered with, an intricate account of the causes and varieties of convulsive diseases, before he has obtained any useful degree of knowledge of the anatomy and physiology of the nervous system, upon which the prevalent doctrines as to the pathology and rational therapeutical indications of such diseases entirely rest. If the term of lectures were extended, it would be possible to diminish the number of lectures for each day, and to make such a distribution of the several branches as would insure an opportunity for the thorough study of the anatomy and physiology of every organ, before the attention of the student should be directed to its pathological states, while several hours would be appropriated to private reading and reflection, and to the practical study of anatomy by means of dissections by daylight.

Regarding, then, "the American system" of medical education by "private preceptorship mainly," at least as that system is carried out in the rural districts, and, consequently, for a large majority of American students, "as radically wrong," your committee would advocate the substitution of a plan which would bring the whole circle of *elementary* medical education within the province of the schools. It has already been intimated that your committee assent to the truth of some of the general principles set forth in the argument of the medical faculty of Harvard university, against the extension of the term beyond the period of four months. The fallacy, as we conceive, lies in the application of these principles. We have no hesitation in admitting the truth of the statements contained in the following extracts: "No course of lectures, however prolonged, can give complete instruction in any department of professional study." * * * * "Lectures cannot communicate all the knowledge of the profession; they cannot approach this." * * * * * "The great purpose of lectures should be, to teach the student to learn for himself. They are not to take the place of private, individual study, but to inform the pupil how that study may be pursued to advantage. Much may be done by the teacher, in this way, to develop the principles according to which medical investigations are to be pursued; to teach the student right modes of thinking, reading, and observing; to aid him in forming just views of the proper objects of inquiry, by laying before him examples of the best ways of getting at the truth." * * * * "Learning is a thing which no man can do for another; the weight of education must fall upon the learner; what he does not get, and make his own, by the active exercise of his own powers, he does not get at all; he must not merely receive, he must take." * * * *

"It is further to be observed, that a disproportioned dependence upon lectures as on means of instruction is likely to beget injurious habits of mind in the student. The object of the teacher is, or should be, to present the truths he wishes to enforce, and the knowledge he seeks to impart, in a form as attractive as the nature of the subject admits, in order to engage and keep up the attention of the student. Hence, although the student may listen with interest, he does it without effort; his mind is not actually employed." With the exception of the last paragraph which, as asserting that it should be the object of a lecturer to present his subject in so attractive a form as to dispense with the necessity of active effort on the part of the student, conveys a most mischievous error, the force of the foregoing remarks cannot be denied. But it should be observed that they may apply as well to private teaching as to instruction by public lectures; and that, in either case, they apply to the abuse alone, and not to the right use of the system. It especially deserves notice that the abuse in question is almost necessarily incidental, not to the lecturing system, but to the short term system, and might be more easily avoided if the proposed extension of the term were generally adopted. The weight of education must fall, unquestionably, upon the pupil; and any system, whether that of public lectures or private preceptorship, which aims to dispense with constant and hard labor on the part of the pupil, is mischievous in proportion to its success. The question is not whether teaching by lectures be better than active, personal study, since these are by no means incompatible, but whether personal study will be most advantageously aided and directed by a judicious course of instruction by lectures, or by "private preceptorship mainly," with "the school as its complement." The medical faculty of Harvard university, though intending to address themselves to the latter question, have, in reality, only discussed the former, all the while assuming the existence of an antagonism between the system of teaching by lectures, if the course be too prolonged, and the habit of active personal study. Your committee do not admit that such antagonism exists. On the contrary, they are firmly convinced that "the active, practical discipline of the mind" is one of the most certain results of the right use of the system of teaching by lectures. Indeed, we have always thought that it was the failure of the old system of exclusive text book study and recitation to secure this practical discipline of the mind, that led to the adoption, in all the higher institutions of learning in Europe and America, of the practice of public lecturing. Under this system, the intelligent student, following in the train of thought pursued by the lecturer in his discussion of doubtful questions, in his analysis of complex phenomena, and in his inductions of general truths from particular facts, learns to perform, for himself, the works so difficult to those who have only studied by a mechanical routine of unreflecting labor, of critical analysis, and inductive generalization.

In order, however, to insure the full success of this system by a right use of it, and by preventing that abuse which is truly obnoxious to the criticism of the medical faculty of Harvard university, and which, unhappily, is too prevalent, it is indispensable that searching examinations should be given, each day, on the lectures of the preceding day. It is this combination of the two systems which is productive of the most wholesome results. Those who have had experience in this matter know how wonderfully the faculties of the mind are stimulated in listening to a discourse on the topics, arrangements, and illustrations in regard to which we expect to undergo a public examination. It is objected that "such examinations amount to very little" when the class is large, and each student is examined at long intervals only. As a test of the industry of an unwilling student who is to be stimulated *only* by the fear of disgrace, these examinations would, it is admitted, amount to very little. But it is a great mistake to assert that, as a means of instructing students of average capacity and ambition, their usefulness is much impaired by the large size of a class. A particular question, although addressed to an individual, is nevertheless, heard by all, and they may mentally answer it, comparing their respective answers with that of the reciting pupil, or with the explanations made by the teacher. Thus, all may derive equal benefit with the person who alone was questioned. Nor will there be wanting a sufficiently potent stimulus, in the case of the candidates for graduation, in those, at least, who know that although they may not have to take part in the recitation of the day, they may be called upon to answer the same questions at their final examination. If the teacher propounds his questions, as certainly he should, in such a form as to throw upon the student the burden of analyzing a complex subject submitted to him for elucidation, it is impossible to exaggerate the benefit which the latter may derive, both in giving precision and completeness to his knowledge of the particular subject, and in the mental discipline which is incidental to the process employed in its acquisition. It must be evident that such examinations will be more useful if conducted by the lecturer himself, than if left to the performance of a third party, especially if the latter did not himself hear and enter into the spirit of the lectures. Your committee perceive much to condemn and little to approve in a system which throws the whole responsibility of the application of this important instrumentality of instruction, upon a class of "Grinders," the extent of whose popularity is measured by the success with which they prepare a pupil to pass his examination with the minimum expenditure of time and labor, and, consequently, with the smallest amount of actual attainments.

The feasibility and the value of the system which is here recommended, have been tested in the medical department of the University of Virginia by an experience of a quarter of a century. In this institution the term of medical lectures is of the same length as the academic session, namely, *nine months;* and never are more than three lectures delivered on any one day. Each lecturer, however, occupies an hour and a half for lecture and recitation, the latter exercise consuming about one-third, or between a third and a half, of the whole time. The class of medical students is about one hundred and twenty-five in number. Of these not more than twelve or fifteen, often not so many, recite at the same time; and yet there is not the slightest ground for believing that the average dividend or benefit to each student is less now than it was ten years ago, when the number did not exceed forty or fifty. We learn that this system is in successful operation in the medical school of Winchester, Virginia, and in the medical department of the University of Michigan. An exposition of some of the peculiar features of the last named institution, as contained in the report of Dr. Pitcher, read at the last annual meeting of the Association, appears to have met with the unqualified approbation of the members then present. Let it be observed that most of those peculiar advantages are incidental to the long term system, and to that alone.

It will doubtless be considered a serious objection to the proposed reform, that, inasmuch as the more trifling extension of the term from four to six months, has not been generally accepted, there can be but little hope that a more radical change in the same direction will meet with favor. The committee are not unmindful of the difficulties which are inseparable from every attempt to make sudden and extensive changes in any system which is of long standing, and the perpetuation of which is supported by manifold real or imaginary interests. But, on the other hand, they do not believe that the difficulty of procuring the adoption of this reform in many of the centers of medical education, will prove to be insuperable. They do not suppose that more than a very few of the existing medical colleges will adopt a system so radically different from that in connextion with which they have enjoyed, and continue to enjoy, a large measure of public patronage; but they do believe that new institutions, the incorporation of which, by legislative authority, the profession is utterly powerless to control, will be induced to make an experiment, the success of which, as regards the thoroughness of the instruction given to the pupil, cannot be doubtful. At all events, the committee feel it to be their duty to recommend such a system of medical education as, in their opinion, may comport with the existing state of the medical sciences, and satisfy the reasonable demand of the profession, rather than to speculate upon the probabilities of its adoption by the medical schools of the Union. If it is true that the profession has ceased to be an educated class, and no longer occupies that elevated position in public confidence which was once accorded to it, we conceive it to be more important to indicate the probable sources of this deplorable degradation, and the means of real and effectual reform, than to inquire what the schools are willing to do, in an emergency which they have been largely instrumental in producing. We hasten to add, that for the attainment of the advantages of that feature of the proposed reform which consists in the extension of the term of lectures, we do not consider it essential that it should be universally adopted. We shall presently express our views with reference to the means by which a higher grade of general and professional attainments shall be rendered indispensable for him who seeks an admission into the ranks of the profession. If this be secured, it will be a matter of comparative indifference by what means the result may have been accomplished in any given case. For that class of students who reside in our cities, and enjoy the advantages of private instruction by competent and zealous teachers, possessing all the necessary appliances for practical illustrations, a shorter course of public lectures may not only be sufficient, but in some instances preferable. But as respects that far more numerous class of students who come from the rural districts, the case is very different. Many of these pass the interval of eight months, between the end of the first course and the commencement of the second, in desultory reading, and without the benefit of suitable instruction or guidance. This course cannot be otherwise than detrimental; and, for the benefit of all who pursue it, an extension of the term is urgently needed. The committee would therefore suggest the expediency of some action on the part of the Association, by which encouragement will be held out to such schools as may be willing to make trial of a reformatory plan, the general features of which are as follows: 1. The extension of the term to eight months, with not more than four lectures per diem at any period of the course, and not more than three during the dissecting season. 2. The exclusive assignment to such schools of the whole ground work of elementary medical education, and the subsequent transferrence of the advanced pupils to schools, whether private or public, in which they should be taught to make practical application of the principles which they had previously acquired.

The increase of expense necessarily dependent upon the acquisition of a medical education under such a system, constitutes a real difficulty; but, after much reflection, the committee are of opinion that no adequate reform can be obtained without some additional pecuniary sacrifice as well as mental labor on the part of the student. If the Association possessed the means of compelling the schools to adopt this system, the committee would regard it as inexpedient to exercise such prerogative. It has been seen that very different views are entertained by the faculties of some of the most respectable institutions of our country. Their frank avowal and earnest defense of those opinions cannot fail to command our respect, how widely soever we may dissent from their conclusions. But let others who may be disposed to make trial of the proposed reform, be encouraged to do so; and then let the tree be judged by its fruits.

3. The omission, in the curriculum established by many of our medical colleges, of one or two important branches of knowledge, is an evil which, in the present state of the medical sciences, and in view of the relations of the medical profession to society, imperatively calls for redress. Your committee are fully aware of the arguments which may be advanced against large additions to a curriculum already disproportionate to the short term allotted to the course. They would not, therefore, for the present, recommend any considerable additions. They would, however, insist upon the urgent necessity of embracing in the regular curriculum the study of physiology, and of medical jurisprudence, both of which are omitted in many of the schools. In a large proportion of these institutions, physiology is assigned to the professor of special anatomy, whose other duties preclude him from the possibility of doing more than merely stating the office of each organ, without inquiring into the conditions of its action, and consequently without elucidating the general laws of vitality. The gradations of organization throughout the animal series, furnishing, as they do, the data upon which most of the inductions of human physiology are based, and therefore felicitously characterized, by the great Cuvier, as so many experiments made for us by nature herself, should be understood by every student of medicine. The study of the outlines of comparative anatomy, as a part of a complete course of instruction in physiology, has an importance which can scarcely be overrated. It may be urged that while this position holds good with reference to those who are to undergo a process of training for the prosecution of ori-

ginal researches, it will suffice for the great body of students, whose object it is to prepare themselves to practice the healing art with credit and success, to adopt, upon the authority of others, the general principles of physiological science. But this is just the kind of instruction which we hold to be not only valueless, but detrimental.

It is the unanimous testimony of all competent teachers, that they experience much difficulty in placing their students in a position to appreciate an abstract principle or general truth, in any other way than by leading them successively along the several paths which converge to that central point. A pupil may commit, *memoriter*, the words in which a general truth is enunciated; but he not only finds it difficult to retain them in his memory, but he derives little benefit even if that difficulty be overcome. The acquisition does not truly become a part of his mental furniture, and is not appreciated as the living truth. But let him be made to apprehend the reality and the significance of the particular facts upon which the induction is based, and to form the conclusion by the spontaneous exercise of his power of generalization, and the truth will strike upon his mind with all the vividness of a personal experience, while the intellect will be invigorated and rendered more acute.

All who have had an opportunity of observing the discreditable figure made by medical witnesses who are subjected, by ingenious barristers, to a searching cross-examination before courts of justice, need no other proof of the desirableness of ample and exact instruction in the principles and facts of medical jurisprudence, as a part of the collegiate training of medical students. Setting aside, then, the higher and more binding motives connected with the conscientious convictions of duty, the sense of disgrace attached to scenes in which, by a public exhibition of deplorable ignorance on the part of a witness, not only he, but the profession to which he belongs, is exposed to ridicule and contempt, should suffice to induce the members of this Association, collectively as well as individually, to use all legitimate means to reform this evil.

In many instances, an attempt to enlighten the court and to subserve the purposes of justice, most signally and to the great surprise of the bench, the bar and the spectators, fails. Such failures sometimes occur to medical men accredited by the community in which they live as men of intelligence, learning and worth, and arise from preposterous attempts to give, upon the spur of the moment, ample and satisfactory information in regard to points the proper elucidation of which would require a careful examination of authorities, and perhaps an exact numerical analysis of well-authenticated cases, the records of which are scattered through a number of volumes. Again, it not unfrequently happens, that the problem submitted to the witness for immediate solution, is one which is not only without a parallel in his own experience, but has not been solved by the observations of others. In such an emergency, the strictly conscientious witness will avow his ignorance; and if the question be one susceptible of elucidation by experiments, or by direct observation, and he be an expert, he will demand time for making such investigations. But the Association needs not to be informed with what readiness the half-educated physician yields to the temptation of making a hasty application of his knowledge, and ventures to express his crude opinions with the positiveness which he finds to be expected of him, and which the counsel, perhaps quite as anxious to support their cause as to elicit truth, seek by every means to provoke. The opposing counsel arrays against such opinions, the equally dogmatic assertions of a rival practitioner, until both are discredited, and reproach and contempt are brought upon the members of the profession as a class. The first and most effectual remedy for such disgraceful occurrences, is to impress upon the minds and consciences of medical men, the folly and guilt of expressing positive and hastily formed opinions upon doubtful or obscure analogies, and the expediency and duty of confessing an inability to satisfy the desire of the court in all cases in which an authoritative decision is not warranted by their own experience, or by the unquestioned experience of reliable observers. But it is undeniable that the occasions for making such avowals will occur far less frequently to the man who is well instructed in the principles of medical jurisprudence, than to one who, though equally well versed in the other departments of professional learning, has paid no attention to that study as an independent branch of medical science. For, although it is true that a very large proportion of the questions arising in medico-legal inquiries are connected with facts of anatomy, physiology, hygiene, pathology and obstetrics, yet these facts require a very different application from that which is made of them by the practicing physician, in the ordinary exercise of his professional calling. Your committee, therefore, regard it as essential to the welfare of society, and to the reputable standing of the profession, that medical graduates should be required to exhibit satisfactory proof of their acquaintance with the leading facts and principles of forensic medicine, and that they should be impressed, by the precepts of their teachers, and by the example of their seniors in the profession, with a due sense of the solemn responsibilities of a medical witness.

4. The profession objects, with much reason, to the entire neglect or very imperfect use of clinical instruction in many of the medical colleges of the United States. As respects some of these institutions, the defect is irremedial, owing to their location in villages too small to furnish subjects for hospital practice. And in some of our larger cities, the seats of the oldest medical colleges in the Union› the hospitals are either entirely inaccessible to the student, or are opened to him under such restrictions as to make it a privilege of little value. In such cases, the schools have been driven to the necessity of finding a substitute in what are termed "college clinics." But even where no other impediment hinders the students from visiting the hospitals daily, those who attend six lectures each day in the college, and are also engaged in the study of practical anatomy in the dissecting room, can find little time or disposition for such clinical observations as will be of any value to them. Hence, it is only the small minority who remain in the city during the summer and autumn, that truly derive any profit from the facilities for clinical observation which the city hospitals may afford.

We have almost invariably found that, among even this class of students, only those who have previously graduated can be induced to read, in connection with their clinical observations, the class of books which constitute the elucidators of disease. The undergraduates feel themselves constrained, by the prospect of a coming examination, to confine their reading mainly to the elementary textbooks. In view of such facts, your committee express their hearty concurrence in the position taken by Dr. Pitcher, in his report, and indorsed by the vote of the Association, "that a familiar knowledge of the elements of medical science should precede clinical instruction." This course is practically adopted by a large number of the better class of medical students, who pursue clinical studies for a period of from one to three years *after graduation*, either in the hospitals of our own cities, or partly here and partly in Europe. Having dissolved their connection with the schools, in which elementary instruction alone can be adequately given, and in which the second-course students pursue precisely the same studies as those who are attending lectures for the first time, they properly lay aside elementary books, and substitute, in addition to systematic "clinical guides," the published records of the clinical observations of those careful and reliable observers who have done so much towards giving precision and certainty to modern pathological doctrines, by authenticating the data upon which they are based, and clearing away the immense rubbish of "false facts" which, as much as aught else, had retarded the progress of medicine as a positive science. By the aid of such accurate clinical reports, carefully studied in connection with the actual observation of cases at the bed-side, the intelligent and earnest pupil may add to his own personal experience that of all the eminent clinical reporters whose works he may read. The descriptions there given of the daily progress of the symptoms, and the effects of remedies, can scarcely be appreciated without the aid derived from an examination of cases of the actual disease ; but with this aid, that familiar law of our mental organization in accordance with which vividness is imparted to our conceptions by being associated with sensible objects, is brought into operation, and the reported cases rise before the mental vision with the clearness and distinctness of reality.

In immediate connection with this topic, the committee would again invite the attention of the Association to the importance of other branches of medical science which may be studied practically. We may specify practical chemistry, the use of the microscope as an instrument of research, and as furnishing data upon which a differential diagnosis may be based, practical midwifery, and operative surgery. It is a fact which may well elicit our mutual congratulation, that efficient instrumentalities for thorough practical instruction in all these branches, are being brought into operation in various parts of the Union. The advertisement of "the New York preparatory school of medicine" is now before us. Such associations, if they fulfill their promise, will deserve the encouragement of the profession. We think, however, that the use of the term "preparatory," may mislead the public, to the detriment, perhaps, of these auxiliary schools. All instruction received by a pupil is preparatory to the great business of life ; but in no sense can such instruction as these schools propose to give, be considered preparatory for that of the incorporated schools. The latter is elementary, and should precede the practical. We shall presently consider, under another head, the objection that may be raised on the score of the difficulty of inducing many students to apply for such instruction, after having received the diploma which entitles them to practice medicine and surgery.

5. This last remark suggests the consideration of the most flagrant and mischievous of all the defects of American medical schools, and the correction of which is essential to the attainment of much or any benefit from any other projected measure of reform. We refer to the disgracefully low standard of professional knowledge and general mental culture exacted of the candidates for the degree of doctor of medicine. There is, we fear, no reason to believe that any degree of reformation in respect to this evil has hitherto resulted from the reform agitation which has occupied so large a share of the attention of the profession during the last eight years. On the contrary, it is believed that in some of the most respectable colleges of the country which have manifested a disposition to adopt several of the measures of reform recommended by the Association, a sort of compensation for the new exactions has been allowed to the unaspiring student, by lessening the rigor of the examination for graduation. It is in view of such facts, that we desire to fix the attention of all our fellow members of the Association upon the importance of greatly elevating the standard of attainments which should be exacted of candidates for graduation, before any practical benefit can be expected from the other projected reforms which have repeatedly been sanctioned by our votes.

The evil in question having originated, in a great measure, in the active competition of rival schools, some have contended that it can only be remedied by diminishing the number of these institutions. If this were so, we should be obliged to abandon all hope of relief, and submit to a perpetuity of disgrace; for those institutions now possess chartered rights, which it cannot be expected that they will relinquish. Nor is it probable that more good than harm would ensue from a diminution of the number of the schools. If students could obtain admission into the ranks of the profession *only* after giving such satisfactory proof of attainments and mental discipline as would test the thoroughness and the judicious character of the instruction they had received, the rivalry between the separate schools would consist in efforts to elevate the standard of medical education by enlarging the curriculum with the progressive advancement of the medical sciences, and by perfecting the means of illustration and exact demonstration. The only available remedy, then, in the opinion of the committee, is the establishment of boards of examination, distinct from the faculties of the schools. It does not suffice to have a committee of the State society present at an examination conducted by the faculty of the school. The desideratum is to have a uniform standard throughout the Union, or throughout the limits of each of those States in which such a board may be appointed.

This scheme, of a divorce between the teaching and the licensing powers, meets with no favor from many of the most zealous friends of medical reform, some of whom found their objections to it upon the presumed impossibility of securing the necessary action of the State legislatures, while others insist upon the inexpediency of committing the affairs of the profession to the control of partisan politicians. These difficulties need not, we think, stand in the way of effecting the desired object. In those States in which a diploma from a regular College, or a license from the State Society, is required to legalize the practice of medicine, as, for example, in New Jersey, we presume that there will be little or no difficulty in assigning the matter altogether to the Society. In those States, on the other hand, in which there are no laws regulating the practice of medicine, and where, consequently, the collegiate diploma has no legal character, its value being solely due to the popular appreciation of it as a certificate of professional attainments from those who are supposed to know the character of the graduate, and are presumed to give truthful testimony, it seems reasonable to believe that the united voice of the profession would be as potent in exacting the possession of a license from an extra-collegiate board of examiners, duly appointed in conformity with a general plan sanctioned by the American Medical Association, and adopted in all the States of the Union, as it now is in inducing young men to procure a collegiate diploma, which is not necessary to legalize the practice of their vocation. At first, no doubt, many would shrink from undergoing a test the result of which might be doubtful; and such persons would endeavor to magnify the value of their collegiate diploma, and to underrate the importance of an additional license; but all the better class would cheerfully present themselves before the licentiate board, and others would soon find it to be their interest to do the same. Moreover, the reflected influence upon the schools, in inducing them to elevate their standard lest they should be discredited by the wholesale rejection of their graduates by the licentiate boards, would be of immense service, although a majority or a large proportion of their graduates might refuse to undergo the additional test. This is precisely the way in which we expect the plan to work most favorably for the cause of medical education.

After many years of anxious reflection upon this subject, the committee feel a strengthened conviction that the scheme is feasible, and that, at the least, it deserves trial. The members of the medical profession in Virginia have, by a large majority of their representatives, in a State convention held in Richmond, in December, 1846, and in several successive annual meetings of the State Society, expressed their conviction of the necessity and the practicability of this measure. The faculties of the medical schools of the State have repeatedly and publicly avowed their acquiescence. Honest differences of opinion exist in respect to the propriety of several of the measures of reform recommended by the Association. Let all unite in carrying out this scheme, and all other measures will settle themselves. The committee are happy to perceive that this subject was brought to the notice of the Association at the last annual meeting, by the retiring president, Dr. Wellford, in an able and eloquent valedictory address. His views appear to have been received with favor, if we may judge from the passage of a resolution to refer this subject to a special committee of which he should be the chairman. We have been informed by Dr. Wellford that he will not present his report until the meeting of next year; and this fact seemed to justify a more extended notice of the subject by this committee, than might, otherwise, have been admissible. We look with confidence to the forthcoming report from that gentleman, for a convincing demonstration of the advantages of the proposed reform, and for the suggestion of a practical mode of insuring its efficient operation.

To illustrate the position assumed by the committee, that, provided the examinations which are intended to test the fitness of the candidate for admission into the ranks of the profession be sufficiently rigid, great latitude of discretion may be safely allowed to the schools in regard to other measures of reform, they would again make a brief allusion to the experience of the medical department of the University of Virginia. It was a favorite policy of Mr. Jefferson, the founder, and until his death the rector of the institution, to make actual qualifications, as tested by numerous and rigid examinations, the only requirement for the attainment of collegiate honors. His aim was to *raise*, and not to lower, the standard of education in all the departments of university instruction; and, with this end in view, to require the most positive and unmistakable evidences of attainments, rather than a specific number of courses of lectures, as a condition of graduation. Every precaution is taken to prevent the possibility of the abuse of this system. The qualifications of the candidates for graduation are estimated by reference to the results of the daily oral examinations in all the classes, of which a numerical record is kept, and especially by reference to the results of "seven written examinations for graduation," held near the close of the session, and occupying each the greater part of the day. These examinations are conducted by a committee of the faculty; and the students, besides being under the view of this committee during the whole time, are required to certify upon their honor that they have not received assistance of any kind in writing their answers. The rigor of these examinations and the high degree of the standard exacted from the graduates, may be inferred from the fact that, while all the matriculates are permitted to become candidates, and about five-sixths do usually announce themselves as such at the commencement of the session, the number of actual graduates is far smaller than in any other American school, being between a sixth and a fifth of the class. Another result of the system, and one which might not have been so certainly expected, is the irrepressible eagerness manifested by the graduates, for a grade of clinical instruction, to be enjoyed elsewhere, which in its extent and accuracy shall conform with the thorough elementary instruction which they have just completed. Almost immediately after the close of the session at the end of June, a majority of these graduates reunite in the large cities to prosecute clinical studies under the guidance of approved practical instructors; and both there and elsewhere they are noted for the zeal with which they seek appointments as resident pupils in hospitals, their career in respect to this matter illustrating the truth of the position sustained in Dr. Pitcher's report, "that a familiar knowledge of the elements of medical science should precede clinical instruction."

6. In accordance with what appeared to be the intention of the Association in assigning the consideration of the subject of medical education to a special committee each year, your committee for the present year have considered themselves as virtually instructed to direct their attention mainly to those defects which seemed to be specially inherent in the "American system," and to the remedial measures that have been suggested from time to time. In the

inquiry into these subjects, regard has been had exclusively, or almost exclusively, to but one of the offices of a place of professional education, that, namely, of imparting an ample store of useful knowledge, both of particular facts and of general truths and principles. Another distinct and yet more important object in any scheme of education, is to fit the pupil for the practical duties of life, by the discipline of those faculties which are to constitute the instruments of his daily operations in the ordinary exercise of his responsible calling. Much may be done toward the attainment of this discipline, as already remarked, by a happy combination of the system of instruction by lectures, with a judicious scheme of daily examinations. But the most important agent in this work is the clinical teacher, under whose superintendence each pupil should be required to observe cases; keep a record of the observed phenomena; announce his diagnosis and the grounds upon which it is based; indicate the course of treatment which might appear to be applicable upon a rational consideration of the known pathology of the disease, or which an enlightened and reliable empiricism had proved to be efficacious in similar cases; and, finally, to analyze a large number of cases, whether perceived by himself or recorded by trustworthy observers, with a view of enlarging his acquaintance with those general truths that might escape notice in the contemplation of isolated cases. The first crude performances of the tyro should be kindly but faithfully criticised, models of excellence should be held up before him for his study, and such incentives to earnest and patient labor should be employed as might appear to promise benefit. All this is, indeed, so obvious, as to have become trite; and if the examinations which give a title of admission into the ranks of the profession were so conducted as to test the student's skill in practical diagnosis, and the extent of his resources, in the management of cases of a certain degree of obscurity, as dependent upon his capacity to deduce conclusions from analogy when more positive data can not be obtained, such instruction would undoubtedly be sought by every student, prior to his appearance before the examining board. Nor would adequate facilities for obtaining such instruction, be long wanting. The demand would at once create the supply. The question to which, in this connection, your committee would desire to invite the attention of the members of the profession, and especially of those who are engaged in the business of medical teaching, has reference to the practicability and expediency of so conducting the process of the preliminary training of candidates for the medical profession as to qualify them for this work of practical medical reasoning. They are impelled to offer a few remarks upon this subject, by a conviction that certain able and popular writers on the philosophy of medical science, have fallen short of presenting the entire truth, and, in their almost exclusive attention to one aspect of the subject, have disregarded or underrated the value of an important instrument of research in the investigation of medical truths.

Unquestionably one great source, perhaps the main source, of error in medical reasoning lies in the slenderness or inaccuracy of the data upon which premature conclusions are founded. To correct this defect, which, of course, would vitiate all reasoning based upon such premises, Louis and others have systematized rules for the exact and faithful performance of that department of labor in medical inquiries, which consists in *verifying* and *counting* facts. Nor can too much praise be accorded to those earnest and self-denying votaries of science, for the zeal and perseverance with which, undeterred by misrepresentation and ridicule, they have pursued their own arduous labors, and for their efforts to enlist the energies of youthful talent in carrying on the good work. But some of these distinguished men have occasionally so expressed themselves as to imply that observation forms the whole work of scientific investigation, disregarding or disparaging, by implication, if not in direct terms, that branch of the problem which consists in the proper *interpretation* of the facts, the occurrence of which has been substantiated by the results of the numerical analysis. Counting and classifying the observed phenomena may suffice for the solution of a certain class of problems, such as the following: a disease being selected for investigation, to determine, by the numerical analysis of a sufficient number of cases, the relative frequency of various pathological changes and symptoms; or to determine the absolute or relative value of a particular remedy, or of a special mode of treatment, by recording the results of such treatment, in a large number of cases, as compared with those which have been substantiated in connection with other methods of treatment. Louis was warranted in affirming, in reply to objectors, that if a sufficient number of cases be taken, the differences between individual cases in one group will be balanced by equal differences in another group. Such groups are therefore legitimately comparable, and from such comparison general conclusions may be safely deduced. The common sense of mankind acknowledges this. It is a simple case of induction, which all physicians practice and rely upon, even those who decry the numerical process, the only difference being that some practice it carelessly, while others, by counting, insure exactness.

But, on the other hand, there are problems the solution of which the medical practitioner is obliged to attempt, whether it be willingly or unwillingly. He must solve them, to the best of his ability. What avails the numerical method when a novel phenomenon or an anomalous group of phenomena is presented for immediate interpretation? It will not, we presume, be denied that, under such circumstances—and they are of almost daily occurrence in the experience of every practitioner of medicine—the physician must be guided, as far as possible, by the light of analogy, the application of which to any given case may involve the use of both the inductive and the deductive processes of mind. Mr. Macaulay has, indeed, undertaken to disparage the value of the rules laid down by Lord Bacon in his celebrated analysis of the inductive process, by supposing a case in which a man rigidly observing these rules, as he erroneously contends, might yet seem to prove that the cause of the prevalence of Jacobinism in England was the bearing of *three* names, and thus arrive at a conclusion monstrously absurd. He proceeds to say that the only difference between such an induction and a legitimate one, "is not in the *kind* of instances, but the *number* of instances; that is to say, that the difference is not in that part of the process for which Bacon has given precise rules, but in a circumstance for which no precise rule can possibly be given." The complete fallacy of this caricature of the inductive philosophy has been well exposed by the author* of a "Discourse on the Baconian Philosophy," who properly insists that it is precisely the *kind* and not the *number* of instances which constitutes the difference between the two cases put by Mr. Macaulay. "For if the instances of the three names had been as numerous as the whole Jacobin party, though it would have been a marvelous coincidence, yet no man in his senses would have believed that the bearing three names was the cause of the prevalence of Jacobinism, and simply because the instances are not of the *kind* from which an inductive inference can be drawn, they not being *kindred* facts conjoined by a law of nature." Invariableness of the succession of two phenomena, such, for example, as night and day, does not always suffice to establish the relation of cause and effect; while in other cases we may often rest with perfect conviction upon the existence of this relation between two events the juxtaposition of which we may have observed in a single case. In such a case, the assigned cause is recognized not merely as a "*vera causa,*" but as one which *on the grounds of analogy* is known to be capable of producing the observed effect. "Whenever, therefore, any phenomenon presents itself for explanation, we naturally seek, in the first instance, to refer it to some one or other of those real causes which experience has shown to exist, and to be efficacious in producing similar phenomena. In this attempt our probability of success will, of course, mainly depend, first, on the number and variety of causes which experience has placed at our disposal; secondly, *on our habit of applying them to the explanation of natural phenomena;* and, thirdly, on the number of analogous phenomena we can collect, which have either been explained, or which admit of explanation, by some one or other of those causes, and the closeness of their analogy with that in question. Here, then, we see the great importance of possessing a stock of analogous instances or phenomena which class themselves with that under consideration, the explanation of one among which may naturally be expected to lead to that of all the rest. If the analogy of two phenomena be very close and striking, while at the same time, the cause of one is very obvious, it becomes scarcely possible to refuse to admit the action of an analogous cause in the other, though not so obvious in itself."* It is clear, then, not only that the possesion of a large stock of analogous instances will augment our resources in undertaking the task of explaining natural phenomena, but that very "precise rules" may be given to teach us how to interpret nature as well as how to observe her operations. The value of Bacon's analysis of the inductive process, and of the rules laid down by that extraordinary man, has been too fully attested by the experience of all the succesful votaries of positive science, to be discredited by the rhetorical flourishes of the popular essayist and historian.

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*Samuel Tyler, of the Maryland Bar.

An American expounder† of the philosophy of medical science would seem, if the phraseology which he occasionally employs be literally interpreted, to repudiate all "reasoning" as an aid in the discovery of scientific truths. And yet, after all, the difference between him and the accredited expositors of the principles of positive philosophy amounts to a mere dispute about words. For after denying, as well he might, that the object of science is to take facts as materials, and build up something out of these facts "by what is called inductive reasoning," which, by the way, is by no means a correct method of stating the position he intends to overthrow, he adds that "the science is in the facts and their *relationships* arranged and classified, and nothing else."

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* "Discourses on the Study of Natural Philosophy," by Sir F. J. W. Herschell.

† E. Bartlett. "Essay on the Philosophy of Medical Science."

Well, this may be admitted, and it is quite enough. The discovery of the "*relationships*" is exactly what most persons mean by a process of inductive reasoning. It is quite true that the "relationships" are not constructed out of the facts, and no man in his senses ever supposed that they were. But it is equally true that they are not discovered by sensible observation *alone*, as particular facts may be discovered. They are not seen nor made palpable to the organs of touch, but are *inferred* when the events which they connect are observed in a certain order of succession. When the phenomenon is simple, the juxtaposition of its elements may be so close as to be easily substantiated, and the idea of the "relationship" arises immediately to the mind. But in the more complicated cases which daily present themselves to the practical physician, we are constrained to avail ourselves of the light that may be derived from our experience in cases more or less analogous. It is in vain to attempt to extinguish the light which the human mind instinctively kindles for itself, when constrained to form some conclusion in case of doubt and obscurity. Analogy is, we may admit, "a fertile source of error" and "the fruitful parent of fallacious conclusions," when allowed to usurp the office of more reliable data, or to have more weight than may attach to the grounds of a provisional conclusion to be verified or corrected by future observations. In reply to all this, we shall probably be told that a tendency to theorize is the bane of medical investigations, and needs no stimulus. We do not propose a stimulus, but a corrective of the natural habit of premature and unwarranted generalization upon remote and doubtful analogies, by the contemplation of cases in which the legitimate use of the argument by analogy has led to useful discoveries, and by the earnest and thoughtful study of such works as Herschell's "Discourse on the Study of Natural Philosophy," Mills' "System of Logic," Whewell's "Philosophy of the Inductive Sciences," Tyler's "Discourse on the Baconian Philosophy," and the great "Novum Oganon" itself.

Your committee beg leave, in conclusion, to submit to your consideration the following resolutions, as a summary of the principal views embodied in the foregoing report:

1. *Resolved,* That the views and recommendations heretofore expressed by this Association, respecting the importance of establishing a uniform standard of preliminary education, of extending the term of lectures, and especially of greatly elevating the standard of professional attainments requisite to graduation, be hereby re-affirmed.

2. *Resolved,* That this Association approves and recommends the practice of daily examinations by each professor, as essential for securing "that active, practical discipline" of the mind which is one of the most important ends of collegiate instruction; and believes, not only that such a system might be easily put into operation, under an extension of the term of lectures, but that the whole ground work of elementary medical instruction might be most advantageously assigned to the schools which may adopt that system, as a substitute for the very faulty one of private office instruction now in common use.

3. *Resolved,* That this Association cordially approves of the establishment of "private schools" duly organized for giving that species of instruction which consists "in demonstrations" and other practical exercises "on the part of the student, instead of the instructor, but still under his direction and superintendence," embracing the whole circle of clinical observation and practice, the use of the microscope, chemical manipulations, and the performance of surgical operations on the dead body; and would earnestly recommend such institutions to the patronage of those graduates who did not enjoy similar advantages during the period of their collegiate pupilage.

4. *Resolved,* That those medical colleges whose curriculum does not now include full courses of lectures on physiology and medical jurisprudence, be earnestly invited to make immediate provision for supplying the deficiency, and to require the professor of physiology to make an exposition of the outlines of comparative anatomy, to such extent, at least, as may necessary to enable the student to appreciate the force of the evidence upon which the modern doctrines of physiology mainly rest.

5. *Resolved,* That to insure the efficient and beneficial operation of the proposed measures of reform, the association considers it essential that some uniform system of examining candidates for admission into the ranks of the medical profession, *in addition to the collegiate examinations for degrees,* should be adopted in all the States of the Union.

6. *Resolved,* That the Association regards as auspicious omens of future progress, the already improved character of our medical literature, and the evidences of an increasing desire, on the part of a respectable number of medical students, for a higher grade of professional education, as exhibited in the patronage extended to extra collegiate organizations for practical teaching ; and that, in view of such encouraging signs, it cherishes an abiding conviction that more thorough and general reforms will be ultimately, though gradually, accomplished.*

J. L. Cabell, M. D., *Chairman.*

Art. II.—*Discovery of Viviparous Fish in Louisiana.*

New Orleans, Nov. 1, 1854.

"What have we here? A fish—a strange fish."—*The Tempest.*

In the month of October, 1854, through the politeness of J. C. B. Harvey, M. D., of Tchoupitoulas Street, I received a small osseous fish, caught in the New Orleans canal, which connects the city with Lake Pontchartrain. This fish had been placed in a basket containing crabs, one of which wounded it slightly in the abdomen near the cloaca, thereby exposing several fœtal fish enveloped in a delicate membrane. The parent fish, which had been rudely thrust into a narrow-mouthed phial of spirits, retains, after immersion for two weeks, the original *rigor mortis,* and the same remark applies to the fœtuses, though they have been soaked in water ; some of them have been forcibly straightened. On the 17th of October, in the presence of, and assisted by Drs. J. Hale and M. M. Dowler, I enlarged the wound, and proceeded to dissect a somewhat globular mass of fœtuses bounded by the intestines before, and separated from them by an indescribably thin, diaphanous membrane; this mass was further bounded above by the spine and ribs, below and behind by the posterior inferior abdominal walls, bulging backward of the anal orifice and fin. The exterior envelope of this oblong globe consisted of a very thin, pellucid, extremely delicate and apparently laminated and flocculent membrane, like the amnion of the human embryo in the early state; it did not form a simple sack, but consisted of many duplications like the arachnoidal reflections among the sinuosities and convolutions of the human brain, sending its prolongations as the hyaloid membrame does, through the vitreous mass of the eye.

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*Dr. Cabell not being in attendance, his report was not read before the Association, and therefore no action was had upon these resolutions.

E. S. Lemoine, *Secretary.*

The uterine membrane (ovisac it may not be termed) contained twenty-two fishes. It is probable that the inner surface of the uterine membrane sent forth a still more delicate membrane, which enveloped each fish after the manner that the peritoneum envelops the abdominal viscera; but the parent fish, and still more its enclosed organs, were too minute to admit of full demonstration during a necessarily hurried examination; moreover, the wish not to mutilate the parent fish very much prevented a fuller dissection of the fœtal mass *in situ*.

Each fœtal fish was doubled laterally, sometimes to the right, sometimes to the left, into the globular form, the caudal fin which is inclined to the lancet shape, though blunter, overlapped one eye and one side of the mouth; each fish *in situ*, and even after forcible extraction from its bed, was infolded in a sack; some were drawn out united by pedicles to a common stem, somewhat like an umbilical cord.

These fœtal fishes presented a perfect example of close packing. A perceptible force was required to dislodge them from their beds. The concavity left by their extraction appeared to be lined with a smooth, black, peritoneal membrane.

The intestines, which were very minute, were crowded forward by the rounded mass of fœtuses which occupied the greater portion of the abdominal cavity. No ova were discovered.

The maternal fish not being much mutilated, is reserved for a more detailed technical description, which my leisure and the limits of this Journal will not admit of at present.

Without attempting fully to describe even the dermal skeleton, I may observe that this tiny fish is a most symmetrical one. Its minuteness may be imagined when I state that, after the removal of the inclosed fœtuses, it weighed only seven grains, though not disembowelled. Thorough desiccation would probably reduce its weight about half or more. The fish exposed for two hours in the shade, on a damp day, was but slightly desiccated. It was weighed by Mr. Macpherson, apothecary, in my presence; but fearing a mistake, I had it weighed a second time, with the same result. If each fœtus should weigh but one grain, the aggregate would be more than three times greater than that of the mother!

Measurements in inches: Length, including the caudal fin, 2 inches; greatest circumference $1\frac{3}{4}$; width vertically $\frac{1}{2}$; length of thoracic fin $\frac{1}{4}$; the caudal fin does not expand from its base or proximal end, but terminates ovally, its length $\frac{1}{2}$; the anal but little expanded $\frac{1}{4}$; the ventral is too minute for convenient measurement, being almost invisible without a lens; the dorsal, which is single, has but a slight vertical width, arising from a base $\frac{1}{4}$ of an inch, nearly opposite, though a little forward of the anal.

The teeth are advanced, nearly ranging with the lips, being very numerous, close and small, though scarcely discernible without a magnifying glass. Lips thin, the under one slightly projecting; angles of the mouth not depressed; eyes medium size; head flattened at the frontal bone; operculum much expanded. The branchiæ largely developed in three great arches, densely fringed with thick tufts, the outer and inner rows inclining to the central, having also one, perhaps more rows behind, which are shorter.

The predominant hue of this fish is a tawny or fawn color; the opercula silvery; head metalic gray; muzzle blackish, slightly projecting.

There are six rows of rather quadrangular black spots, more particularly marked in the posterior half of the body, averaging twenty-five spots for each row. These black spots resting on a tawny ground, leaving intervals something larger than themselves, give a picturesque appearance, forming stripes of alternating hues, the three upper of which slightly curve corresponding to the arching back; but each becomes straighter, the fourth and fifth being nearly straight; the sixth or lower row follows the abdominal curve, and disappears at the anal fin; the other five rows gradually converge without coalescing at the origin of the caudal fin. At the origin of this fin the spots are displaced out of line. By this arrangement the six rows of alternating black and tawny leave in the longitudinal direction six other continuous tawny stripes, all of which, except the two interrupted ones lost at the anal fin, converge without mingling in the tail, all being about equal in length. The colors fade somewhat into a grayish yellow around the thoracic fins, which are nearly central between the dorsum and abdomen, being on a level with the eyes, and about one line from the opercula.

There are six or seven rows of scales. The spinous rays of the fins are about twenty-five caudal, twelve anal, fifteen dorsal, ten thoracic.

These fœtuses are half an inch long, all alike, exactly resembling the maternal form and proportion, with the following slight exceptions, namely: their bodies are more slender and compressed laterally; their heads are comparatively larger, and their eyes more prominent: their colors are less variegated, and paler; a still greater difference appears about the middle of the abdomen, where there is attached to each fœtus a whitish, faintly yellowish, placental-like, irregularly formed mass of considerable size, having a broad base, being apparently implanted in or blended with the abdominal integument, possessing considerable strength, and constituting what may be termed the umbilical prominence; perhaps it may turn out upon further examination that this mass may be not placental, but an adherent mesenteric mass of convoluted membrane.

These fœtal fishes were probably sufficiently developed at the time of the parent's death to live independent of the mother.

It appears from the proceedings of the Academy of Natural Sciences of Philadelphia, for 1854, that Dr. Gibbons, of the Academy of Natural Sciences of San Francisco, "claims priority of description of viviparous fish," in behalf of the gold-shimmering waters of California, and consequently that state takes precedence over Louisiana. Agassiz, whose sounding (fishing) line has passed the living waters to the most ancient palæozoic rocks, says, in regard to the California viviparous fishes, that "a country which furnishes such novelties in our days, bids fair to enrich science with many other unexpected facts."—*N. O. Medical and Surgical Journal.*

B. Dowler, M. D.

Art. III. — *Female Doctors.*

All of us remember how profoundly, a few years ago, the female mind in this country was agitated by the Bloomer crusade. The cry went forth from the women of America to the women of England, calling upon them, as they valued their freedom — or, rather, their supremacy — to rebel against the yoke which they supposed to be typified in their petticoats; to revolutionize the time-honored but despotic millinery regulations: and to put on, as the symbol of their independence and of their equality with tyrant man, that garment of the nether limbs which it is considered indelicate to describe by name, but which hitherto had been wrongfully and despotically appropriated to the male sex. The philosophical and skillful Amazon, Mrs. Colonel Bloomer, who had assumed the conduct of this great campaign on behalf of the rights of women, had accurately fathomed the influence of dress upon the mind. The ingenious author of "Sartor Resartus" himself did not more fully appreciate the importance of external decorations as instruments for subjugating the intellect of mankind, than did the gallant Coloneless when she boldly unfurled before her down-trodden sisters, as the standard of revolt, that unmentionable garment which insolent men had oftentimes in ribald metaphor taunted them with surreptitiously wearing.

It is not our purpose to trace the succession of events by which the failure of the Bloomer costume was brought about. We still avow ourselves of the school of Thomas Carlyle. We still believe in the efficacy of dress as an agent in moral government. If the —— (our readers must apply the word we are not at liberty to mention) are still worn only by a few of the more daring and determined of their sex, we can only conclude that the petticoat which Mrs. Bloomer would discard and repudiate as unfitted to be the emblem of government, is, in reality, the garment that is the most in harmony with the mental qualities that Nature has implanted in the female sex. But contemporaneously with this bold assumption of masculine attire, there was at work, in the more advanced and disenthralled departments of the United States, a spirit of ambition more practical in its nature, that aimed at grasping not only the outward garments of man, but also usurping functions which the tyranny of custom had assigned to him. Female Colleges of all kinds were instituted. The inherent right of women to academical distinctions—to enter upon the practice of the learned professions—was loudly proclaimed. Medicine, ever peculiarly exposed to the inroads of charlatanry, was the first profession to tempt the zeal and the ambition of the New Amazons. It had long been a subject of reproach that Medicine was degraded by the ignorant pretensions of "old women" of both sexes; why should it not be regenerated and honored by *young* women of powerful and instructed minds? Accordingly we have witnessed the revival of lady-professors of anatomy, physiology, medicine, surgery and mid-wifery; we have seen these lady-professors conferring the degree of Doctor of Medicine—we believe they pretermit the lower grade of Bachelor—upon the young ladies who have completed their studies; and, lastly, we have seen these lady-dubs, under their proper professional and academical appellations, driving about the enlightened towns of America in befitting broughams, expounding medical mysteries, giving advice and taking fees! One of these lady-doctors, more ambitious than her professional sisters, not satisfied with the state of science in America, had laudably resolved upon improving her learning and her skill, by visiting the European Schools of Medicine.

A Miss Doctor Blackwell, a graduate of Cleveland College, Ohio, having completed a course of study at the Royal Maternity Hospital, at Edinburgh, has applied to the Managers of the Royal Infirmary for permission to prosecute her studies in the female wards of that institution. It is supposed that her intention is ultimately to eclipse the home-bred lady-graduates of America, by returning to New York with the degree of Doctor of Medicine of the University of Edinburgh, and the Fellowship of the Royal College of Physicians of London. That a purpose so praiseworthy should be opposed by the refusal of the Managers of the Royal Infirmary to accede to the request of Miss Doctor Blackwell, we cannot but regret. In order that Miss Doctor Blackwell may not return to America, there to propagate the injurious reproach against our national character, that we know not how to encourage females in the pursuit of medical knowledge and collegiate honors, we beg leave respectfully to inform her and her sister graduates, that the Royal College of Surgeons in England is animated by a more enlightened and transatlantic liberality; and that the new order of Licentiates in Midwifery is open, by an act of Parliament, to "persons" of both sexes.—*London Lancet.*

Art. IV.—*Discussion at the Imperial Academy of Medicine on the Treatment of Displacements of the Uterus by Intra-uterine Pessaries.* Report of M. Depaul. Remarks of MM. Velpeau, Malgaigne, Cazeaux, Amussat, Ricord, Dubois, Jobert, &c.

This brilliant debate, which caused an extraordinary sensation in the Academy of Medicine, was originated by Dr. Broca, who detailed a case from his own practice, where death had followed the use of the uterine catheter. M. Cruveilhier related another fatal case, and declared his strong opposition to the use of uterine instruments. A committee was appointed by the Academy, and their report drawn up by M. Depaul, who, after entering at great length into the whole subject, condemned in most severe language the use of the intra-uterine pessaries and bougies. We will offer to our readers a very brief account of the cases, the report, and the discussion which ensued.

Cases of MM. Broca and Cruveilhier.

Broca's case was that of a woman aged 39, the mother of three children, who for a twelve-month had been suffering with suppressed menstruation, pains in the thighs, disorder of the digestion, obstinate constipation, and frequent calls to make water. On examination a very marked anteversion was detected, the cervix was enlarged and granular, with a glairy discharge from the os. On the 7th of October, the uterine sound was introduced; it reached to 6¼ centimetres. The uterus was brought into position and kept there for five minutes, without causing any pain. This operation was repeated on the 8th and 10th, the patient declaring herself better. On the 11th slight pain was felt on the introduction of the sound; the pain became more intense on the 12th, and was followed by fever, nausea, vomiting and constipation. The attacks of pain became more frequent, the pulse small, the abdomen timpanitic, and the patient died on the 23d. *The Autopsy* disclosed remarkable adhesions of the intestines to the abdominal parietes, and at about sixty centimetres above the ileo-cœcal valve *the intestine was adherent to the uterus,* greatly distended above and contracted below that point. Besides the old adhesions, there were recent ones not yet organized, in short, there were evidences of two attacks of peritonitis, one of the old and the other of recent date. The right Fallopian tube was dilated and attached by old adhesions to the uterus and rectum. It contained a considerable quantity of pus. At the angle of the uterus near the insertion of tube was a collection of pus.

M. Broca believed that the introduction of the sound caused metritis and peritonitis, and that the recent, added to the old adhesion, had completed the intestinal obstruction. M. Valleix, however, contends that this contraction pre-existed before the introduction of the sound, and was not dependent on its use.

M. Cruveilhier's case was that of a young woman, aged 24, who had been married four years and was barren, which was attributed to a slight anteversion of the womb. She came up to Paris to place herself under the care of M. Valleix. The sound was introduced five times in one month, but could never be retained long, because of the sickness, distension of the abdomen, and severe pain which it produced. She returned home sick ; M. Cruveilhier recognized metro-peritonitis. In a week after, the patient died.

M. Valleix considered the patient tubercular, and thought that she sunk under tubercular peritonitis.

M. Depaul's Report.

M. Depaul, in his report, which is of great length, undertakes to prove, that uterine affections are too often attributed to displacement, when they really arise from pathological conditions of that organ ; that even in displacement, we possess a more rational method of treatment than the intra-uterine pessary ; that the facts adduced to show the efficacy of these instruments are not satisfactory. Whereas, there are numerous facts proving that the most formidable affections, and even death itself, may be the consequence of their employment.

The reporter alludes to the two kind of instruments in use for uterine displacements—the uterine sound of Simpson & Kiwisch and the intra-uterine pessaries of various kinds, also known as Simpson & Kiwisch's, although the original idea has been claimed for Amussat and Velpeau. The sound which he declares had long been used by Racamier and Amussat, is considered of undoubted service in diagnosis, and may be useful in restoring the uterus to its normal position ; the strictures of M. Depaul are mainly directed against the pessaries, although he considers the use of the sound as not without danger.

The next object of the report is to prove that uterine displacements do not produce the mischief which is attributed to them. More than half of the sex are subjects of them; their influence has been greatly exaggerated, and the symptoms attributed to these deviations are the result of other pathological conditions. In pursuing this argument, the reporter gives to the 180 cases of M. Valleix, a severe analysis. He shows that these cases are inconclusive, and may be turned into evidence against the treatment they are intended to support. With regard to Dr. Simpson's practice, he was unable to give the results, as that gentleman, when applied to, communicated only assertions without proofs.

M. Depaul next proceeds to show the danger in the use of the intra-uterine pessary. Drs. Churchill, Ashwell and Graves are quoted, and Dr. Robert Lee's case, where the "impaling machine" was extracted from the uterus. Strong evidence is adduced to show the unfavorable estimation in which the practice is held by eminent obstetricians.

Many like objections are brought forward against the use of the uterine sound. According to Depaul, it is not often necessary in diagnosis, and is not exempt from serious danger. Cases of fatal peritonitis, abortion and death, are derived from the reports of Gueneau de Mussy, Huguier, Nonat and Valleix, and the report concludes by declaring that the efficacy of the mechanical treatment could not be proved; that the pessary gave rise to dangers of the most alarming kind, and that the sound, though of advantage in the diagnosis of certain affections, from the great risk attending its use, should be reserved for the exceptional cases which require it.

Discussion in the Academy.

M. Malgaigne, while admitting the zeal and talent of the reporter, regretted to find so much party spirit in it. He believed that in some cases, the intra-uterine pessary might be useful. He had often witnessed cases of descent of the uterus, where the use of the pessary had put a stop to all the symptoms. *The hypogastric belt,* also, by replacing the uterus, had often produced the same beneficial results. The important point was to establish a differential diagnosis of uterine affections; whether the symptoms should be ascribed to displacement, to *engorgement,* to granulations, ulcerations, &c. In short, the intra-uterine pessary should not be entirely rejected, but its use should be confined to cases without inflammation, acute or chronic. The instrument should be used cautiously, and not be permitted to remain permanently, and above all, the treatment should be controlled by the rational indications.

M. Huguier was a member of the committee, but did not sign the report. He believed that the intra-uterine pessaries were sometimes useful in cases of displacements, and especially commends their efficacy as emmenagogues, when other means had failed. He considered uterine displacements curable, and closed his able address by describing his method of replacing the uterus when retroflexed, *by inserting pledgets of lint in the rectum.*

M. Hervez de Chegoin was of opinion that uterine displacements give rise oftentimes to distressing syptoms, which were relieved by replacing the organ. This result, however, should be accomplished by *pessaries external to the uterine cavity.* He considered that the intra-uterine pessary should be dismissed from practice.

M. P. Dubois did not believe that the pessaries of M. Chegoin ever would replace a retroflexed womb. He considered the intra-uterine instrument could effect that object temporarily; and the principal question was, are they without danger? Although but temporarily replacing the uterus, they would alleviate and sometimes cure by relieving the weight of the uterus and the tension of its ligaments, and *by the alteration of its morbid sensibility in cases of neuralgia.* Consequently the intra-uterine pessary should be retained in practice, not as directors of the position of the uterus, but as modifying agents which may be placed in competition with cauterizations, douches, &c. In all cases, the general treatment should be attended to as well as the local.

M. Cazeaux expressed his opinion at great length. He objected to the report as giving the unfortunate cases, and suppressing the successful ones. He believed that by removing the displacment, the symptoms and even the concomitant lesions might be cured, but differed with M. Dubois, in maintaining the efficacy of M. Chegoin's vaginal pessary in retroflexion. He considered inflexion to be a congenital condition in the child, thus adopting the opinion of Boulard, Follin and Verneuil. He was opposed to the use of the intra-uterine pessary, but thought the uterine sound a useful instrument.

M. Gibert maintained that too much importance had been attached to uterine diseases which often depended on constitutional conditions, and he mentioned instances, where erroneous and overstrained views had led to methods of treatment as harsh and dangerous, as they were useless and uncalled for.

M. Velpeau, in one of the most important addresses delivered during the discussion, entered at length into the details of the question, and opposed in strong terms, the report. After passing a high eulogium on M. Valleix and his practice, he proceeded to say that the effects of uterine displacements were not exaggerated. He recognized the importance of replacing the organ, and rapidly reviewed the principal remedies, which he declared to be generally inefficient. In consequence of this conviction, he had long ago tried the intra-uterine pessary, but had deserted it more on theoretical than practical grounds. He now thought the dangers of these pessaries had been exaggerated, and confidently trusted to the experience of M. Valleix to disclose the advantages and objections to their use. M. Velpeau was of opinion that the conclusions of the report should be suppressed, and that the Academy could only act on the cases of MM. Broca and Cruveilhier.

M. Amussat said that the idea of introducing bougies (*tiges*) into the cavity of the uterus suggested itself to him in 1826, on seeing M. Recamier use the uterine sound for diagnostic purposes. One of the first cases in which he used the pessary, was that of a woman with anteversion. He introduced a pessary with an ivory stem, and allowed the patient to go about with the instrument in the womb. Inflammation supervened, and the woman died. Distressed at this mishap, he attempted to remedy displacements with extra-uterine instruments. He employed for this purpose conical pessaries shaped like cupping glasses, but had to give them up on account of the pain they produced. Much discouraged by the results of instrumental treatment, he adopted the practice of *cauterizing the posterior part of the cervix*, that by the adhesions formed during the cicatrization of the sore, the displacements might be radically cured. He was led to this idea by noticing those spontaneous cures of uterine displacements, resulting from local inflammations and ulcerations, producing adhesions between the vagina and uterus, and he thus imitated nature. The results of this practice were very favorable, and M. Amussat related many cases. He did not think the cauterization of the anterior lip of the cervix so beneficial in anteversion, and in such cases, he used a pessary (*en gobelet*) to support the womb. In conclusion, he condemned the indiscriminate use of pessaries, more especially of the intra-uterine instrument, and declared his method of treatment to be free from danger and more successful.

M. Malgaigne again spoke at great length. He referred to what had been said by M. Dubois with regard to the frequency of neuralgia of the womb; for, although he had seen it he did not regard it as common, but he bowed deferentially to the experience of M. Dubois. He maintained that the pain caused by pure displacements of the uterus would be relieved by the recumbent posture, and that this circumstance was pathognomonic of the affection. He looked upon the speculum as of little use in displacement, as he had known cases diagnosed by its use, as ulcerated cervix, and treated needlessly with cauterants. The suffering caused by displacement was by no means regulated by the extent of the deviation, but rather by the peculiar susceptibility of the patient. M. Cazeaux had said that congenital displacements were seldom the cause of pain, whilst those occurring accidentally always produce suffering. He could not see how the distinguished gentleman ascertained the difference, unless by asking the patient—" Madam, have you had this inflexion since your birth?'' The speaker then alluded to M. Velpeau's address, and closed his remarks by declaring his belief in the uncertainty of any permanent cure for uterine deviations. He believed that, in some cases, there was a spontaneous cure, in others, complete recoveries had been effected, but there was no certainty in any mode of treatment.

M. Ricord desired to make a few remarks on the treatment of certain hyperæsthetic conditions of the uterus consequent on displacement. He considered that much of Valleix's success was dependent on his isolating the uterus from its painful position without making pressure on the morbidly sensitive parts. He had invented an instrument which would isolate and support the uterus without entering its cavity or touching the vagina. This instrument was a forceps which was introduced by the aid of a speculum, and the points of which seized the cervix. By means of a ring moved by a screw, the uterus could be raised to any required point, and the whole apparatus was fixed by means of the plate (*plastron*) of M. Valleix's instrument.

M. Robert, being a member of the commission which brought in the report, made an address, which we can only notice very briefly. He did not think that the influence of uterince displacements had been exaggerated. He had for a long time been in the habit of using dilating bougies, without any bad result. He had also used Simpson's pessary. Although injurious results had followed the use of this instrument, he admitted that there were cases where all other methods failed, and this mode of treatment had been productive of lasting good. He thought it would be premature to exclude this instrument from practice.

M. Depaul, lastly, replied at great length to the numerous strictures on his report. He did not believe in M. Huguier's exceptional cases requiring the use of the intra-uterine redressor. As for its value as an emmenagogue, true, it produced a bloody discharge, but it was not the menstrual secretion, but a true hemorrhage which had been mistaken for menstruation. He protested against the injustice of M. Cazeau's accusation of having only reported the unfortunate cases. He knew of no successful ones. M. Cazeaux alluded to the catarrhs, granulations, ulcerations and neuralgia co-existing with displacement. There were the lesions to be attacked and relieved. He denied M. Cazeaux's statement that anteversion was the normal condition in children, and women who had not borne children. Intestinal expansion in the dead body might raise the organ, and so deceive observers. He regretted that M. Cazeaux had omitted to give the "proper precautions necessary to render uterine catheterism safe." He then asked M. Dubois if his statement was true, that the uterus was never permanently replaced by the use of instruments, where was the advantage of a dangerous attempt with the intra-uterine redressor? (*"Les redresseurs ne redressent pas."*) As for M. Malgaigne's hypogastric belt, he had been invited to see it applied in two cases at the Hospital St. Louis, and upon examination manually and by the speculum, he ascertained that ulceration existed in both case, and although there was slight anteversion in one instance, in the other, there was no displacement at all. He agreed with his learned master, M. Velpeau, as to the scientific attainments of M. Valleix, but he did not approve of his practice. Velpeau declared that the great difficulty was in applying the instrument, but he (M. Depaul) thought that such men as Valleix, Huguier, Nélaton, Aran, &c., ought to be able to do it. What astonished him was that the uterus was so intolerant of a clot of blood or a small polypus within its cavity, and yet would bear with patience such an instrument as this. He closed his remarks by laying before the Academy the following conclusions, carried by a majority, with the exception of the third, in which M. Depaul said he was at variance with his colleagues:

1st. The cases reported to the Academy by MM. Broca and Cruveilhier, along with numerous others on record, prove that the use of the intra-uterine pessary may often occasion serious accidents, and sometimes even death.

2d. In the rare cases in which this instrument has appeared productive of advantageous results, it is not proved that it had always acted by replacing the uterus.

3d. In some exceptional cases where uterine displacements (deviations) have occasioned serious functional derangements, and where all known therapeutic measures have been tried in vain; the application of the intra-uterine pessary may be tried as a last resource.

4th. The commission has the honor to propose a vote of thanks to M. Broca, for his very interesting communication which has originated the late debates ; and also to M. Cruveilhier.

The president put the first conclusion to the vote.

M. Velpeau.—This conclusion appears to me to have been adopted ; but it is too severe. Instead of saying "the use of the intra-uterine pessary may *often*," I would substitute the words, "may *sometimes* occasion," etc.

The President.—It is proposed to suppress the adverbs altogether. It should be read: "The use of the pessary *may* occasion," etc.

The President then put the first conclusion to the vote, with the word "*often*" suppressed. It was adopted in this modified form.

The *second* conclusion was carried unanimously, without any modification.

The *third* conclusion was then read, and M. Gibert demanded its suppression.

M. Velpeau.—I insist on its being allowed to remain.

M. Cazeaux.—I am convinced that the use of the intra-uterine pessary is always useless, and sometimes dangerous. I can not adopt this conclusion.

The President.—It contains the words, "as a last resource." For this purpose we may try any thing (*laughter*).

Several members proposed the suppression of the conclusion, and the President proposed to put it to the vote.

M. Jobert requested the suppression of the words, "as a last resource" (*comme dernière ressource*).

M. Velpeau supported this amendment.

The conclusion, thus modified, was put to the vote, and was rejected.

Art. V.—*Chloroform in Fever.*

Dr. Gordon, of the Hardwicke Fever Hospital, resorts to the use of chloroform to subdue the nervous irritation in fever, and obtain sleep. He remarks:

To the different means which have been made use of for this purpose, I would now add the internal administration of chloroform. I have used it with the happiest results when all other means had failed, and I can speak with confidence of its certain and speedy action. The following case affords a good example of its effects, and the mode of its administration:

Patrick Dempsy, aged 25, was sent from Santry to the Hardwicke Hospital, on the 8th of December; he had been eleven days ill of fever; his body was covered with dark-colored maculæ; his pulse was 110, and very weak, his speech muttering and indistinct; he had subsultus in both upper and lower extremities. His head was shaved, he was ordered the bark mixture of the hospital, and half a pint of wine. Late in the evening he began to rave violently, and could not be induced to remain in bed; he was ordered large doses of hyoscyamus, and the back of his head was blistered; he was so violent as to require the use of a strait waistcoat all night. December 9.—Has not slept since admission. Pulse 132; very weak. He continues constantly muttering and raving. Tongue dry and brown; eyes slightly suffused; head not very hot; respiration short, frequent, and irregular. He still requires the strait waistcoat to keep him in bed. He was now ordered twenty-five minims of chloroform in a draught, to be repeated in an hour. After the second draught his agitation and restlessness ceased, and the waistcoat was removed. He dozed a little through the day, but only for a few minutes at a time. Towards night he again became restless and delirious; the same quantity of chloroform was again administered, and repeated in an hour, when he fell into a sound sleep, which continued for nine hours. He awoke perfectly sensible; the subsultus had ceased, and his pulse had fallen to 100. He continued to improve, and in a few days was convalescent.

In this, and other similar cases, chloroform acted by producing anæsthesia of the sensory nerves, and exerting a paralyzing influence on the muscular fibre; and this it appears to effect without depressing or deranging a nervous force, as is the case with sedatives in general, while it is altogether free from the objection of causing depression of the action of the heart, as is the case with some special sedatives. My colleague, Dr. Corrigan, has just treated a somewhat similar case by the internal administration of chloroform. I had an opportunity of daily witnessing the progress of the case; and, by his permission, I here append it.

Denis Behan, æt. 20, a porter from High street, was admitted into the Hardwicke Hospital, January 4, 1854, the fifth day of his illness. On the sixth day he was thickly covered with bright maculæ. His tongue was loaded, but moist; his pulse 112; respiration 22; no abnormal sound in the lungs; no tenderness of abdomen. He is reported not to have slept for two nights. His eyes are red and injected, and his head hot. His head was shaved and cold lotion applied. Seventh day.—Pulse 116; respiration 28; slept but little. Eighth day.—Pulse 120; very feeble; respiration 32. Ordered bark and wine. Ninth day.—Pulse 126; very feeble; respiration 32; head hot; constantly raving, and getting out of bed; no sleep; subsultus of hands; tongue dry; great difficulty of utterance. Vesicatorium nuchæ; eight ounces of wine. Tenth day.—Pulse 130; weak; raving continually; difficult to restrain; requiring the strait waistcoat; constant talking; no sleep; tongue brown and dry in the centre; thirsty; eyes very congested; pupils dilated. Chloroform was now administered by inhalation, without any other effect than the pulse being slightly reduced in number. The patient was in no way quieted by it. Four leeches were now applied to the temples without any good effect. At 5 P. M. he took ʒss. chloroform by the mouth, and continued it every second hour till 11 P. M., when, as he did not sleep, and the delirium continued, he took a similar dose of chloroform every hour through the night. At 3 A. M. he was somewhat quieter, but the same dose was continued every hour till 8 A. M. Eleventh day, 10 A. M.—Much quieter, but has not slept. Pulse 110; pupils natural size; subsultus nearly gone; tongue brown all over; sordes on teeth; bowels free; urine high colored, sp. gr. 1-020. Another dose of chloroform in the same quantity was again administered; about twenty minutes after its exhibition he fell into a quiet sleep, which lasted two hours. Shortly after waking, he took another half drachm of chloroform, when he almost immediately fell asleep, and awoke after several hours, much refreshed and quite collected. His return to health was further indicated by the immense quantity of nitrate of urea, which an excess of nitric acid deposited from the urine.

In the above case the chloroform was longer in producing the effects than in any instance in which I have yet used it. We learn from it, however, that we are not to be discouraged by the apparent failure of the first dose or two in procuring sleep, for, as in the present case, although actual sleep may not be at once procured, we may expect that a state of calm and quietness will be induced, which would soon be followed by "*Nature's sweet restorer, balmy sleep.*" We learn also from this case, that the inhalation of chloroform is, to say the least, useless in procuring sleep in cases of cerebral excitement in fever. I had, on one occasion before, in the Hardwicke Hospital, fully tried this mode of administering it; its inhalation was followed by general convulsive movements, very similar to an epileptic seizure, and I have not since administered it by inhalation in any similar case. Dr. Corrigan carefully tried the effect of inhalation three times in the above case; each time without any good effect.—*Dub. Hos. Gaz.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Drake's Systematic Treatise, Historical, Etiological and Practical, on the Principal Diseases of the Interior Valley of North America. Edited by S. Hanbury Smith, M. D., and F. G. Smith, M. D. Second Series. Philadelphia: Lippincott, Grambo & Co., Publishers, 1854. (For sale by Riley & Co,)

This work, looked for some time before the author's death, has at last made its appearance through the publishing house of Lippincott, Grambo & Co., and contains nearly one thousand pages, done up, so far as mechanical execution is concerned, in very superior style.

It is a proper sequel to the volume published a short time before the author's death, and which latter is confined mostly in the attempt to lay the foundation for a history of the diseases in the Interior Valley of North America, among the Caucasian, African, Indian and Esquimaux varieties of its population.

In looking through the volume before us, we observe that the author in making out the history and treatment of most of the diseases considered, has introduced the observations of quite a large number of the physicians residing in the different localities embraced by the work. This to many might seem to be objectionable. Why not make the work the result exclusively, of his own observations? He has lived long enough, some would say, in the Valley, to have observed every form and phase of the diseases which take place in it. Well, we presume he was actuated among other things by the maxim which says, "In the midst of counsel there is safety;" or the one that "two heads are better than one, allowing one of them to be a sheep's head." In looking, however, carefully into the character of the matter, we find that the extent of country, embraced by the work is vast. Some seventeen degrees of latitude and as many of longitude; that its physical character was much diversified; that the constitutions and habits of the people in the different regions differ almost as much from each other as do the inhabitants of any two countries on the face of the globe, that much of the territory, embraced by the work, has been settled less than half a century, and that by a population, partly American, but mostly foreign, and from countries in some of which there is nothing like malaria to disturb the physiological condition of the system. How, therefore, could the author or any other, not possessed of individual omniscence give a faithful and accurate description of disease occurring under such a variety of circumstances. The only course that an unselfish lover of truth could pursue seems to us the one adopted by the author. He passed over most of the country himself, observing all that he could; and then receives from physicians practicing in the different localities, their accounts of the diseases most prevalent in their neighborhoods. These facts he digested, and incorporated those of them that he thought valuable in the body of his work; and he has appended to them such remarks as he regarded proper. Thus constituted, the work may be regarded as a reflection not only of the extensive observations of the author himself, but also of the intelligent portion of the profession. The reader or the intelligent physician, educated in countries where diseases such as the author has described, do not abound, will here see not only the experience of a single physician, in regard to the pathological habitudes and the treatment most successful, but a digest of the combined judgment of a great number of medical men, who for strong sense and things practical in the profession have, in our humble judgment, no superiors on the earth. They are the men that don't fold their hands and imagine all is well when a malignant intermitetnt has made one demonstration before them. They know its usual tendencies and what may be expected from a repetition of paroxysms, and instead of pattering over the patient with a few time-keeping fibre fingers, such as might be proper in Lawes' Typhoid Fever, they resort at once to the proper remedies, and in quantities sufficient to avert the impending catastrophe. Who, we may indeed inquire, are more competent to give a history complete of malaria, the various forms of disease to which it gives rise, and the manner in which these become mixed up with other complaints than such men as Dowler, Sutton, Cartwright, Boling, Ridgley, Fearn, Carrol, and a number of others that the author has cited—men that have spent the most of their lives in the localities where accurate and comprehensive information can, on this subject, alone be obtained. We have no disposition to institute invidious comparisons, but we cannot resist the conviction that the opinion of either of the individuals alluded to, touching the subject under consideration would be worth more than those of most of our American, English, French, or German authors, distinguished for writing works on Practical Medicine.

A portion of the volume before us is taken up in the consideration of Fevers—Autumnal, Yellow, and Typhus. After these the author introduces Phlogistic Fevers, Eruptive Fevers, and the Phlegmasiæ.

As is usual, Autumnal fever is divided into simple and inflammatory intermittents, malignant intermittent, and remittent—simple and inflammatory.

Our space is not sufficient to notice the author's views in detail on these interesting subjects. What he has, however, said on the symptomatology of malignant intermittents, seems to us valuable, and we therefore insert the following:

"There is not perhaps in the whole range of symptomatology, a more difficult task than that of making a graphical presentation of the symptoms, which accompany and characterize our malignant intermittent fevers. This results from several causes: *First.* Their number; all the functions being morbid. *Second.* Their simultaneous occurrence; as if the whole of the organism had been affected by the direct action of the remote cause at the same time. *Third.* The suddeness of their occurrence on the access of the paroxysm; presenting in a single hour, transition from a state apparently bordering on health, to one of impending dissolution. *Fourth.* The deep involvement of one great organ in one case—of a different one in another, and a consequent modification of the symptoms. Compared in the diversity of their phenomena with the most malignant cases of scarlatina, typhus gravior, or epidemic cholera, they are decidedly more difficult to portray in a methodical and faithful manner than either. Moreover, their malignity sometimes shows itself by the slightest possible anomaly. Thus a partial numbness, or a coldness of the great toes, instead of a regular chill, or a disposition to sleep at the access of the paroxysm, may be all that suggests anything more than the most harmless intermittent. Hence they stand connected, on the one hand, with a simple ague: while, on the other, they graduate into the malignant remittent type, in such a manner that a separate description would scarcely be worth the trouble, were it not that a series of morbid states, however intimately catenated, must be studied in its links, before it can be comprehended in its entireness.

"By far the greater number of cases begin as regular intermittents, with a cold fit too slight to excite more than a moderate shivering; such, for example, as ushers in a simple remittent. The cold stage is not followed, however, by the well-developed and prolonged hot stage of that variety of fever; but by one so inconsiderable, that the patient in many cases is soon upon his feet, and often resumes his business till the next day, or the day after that. If nothing should have been done, the second paroxysm will be more severe; his coldness will be greater and more prolonged, yet not productive of a shake; he may have a considerable degree of drowsiness, or dyspnœa, with a sense of thoracic oppression; his stomach may become irritable, with a sense of epigastric sinking; or some topical sweating may show itself. To these symptoms, but more slowly than the day before, will succeed a reaction of moderate force, and when it ceases, the patient, if not alarmed, will be again out of bed, and, perhaps, occupied. The third, and even the fourth paroxysm may thus pass away; each, however, presenting an increase of intensity in the symptoms, and a full development of them be reserved for the fifth. But this is rare; and, in the majority of cases, the third fit not only discloses the danger of the patient, but often proves fatal; or he struggles through it to die in the next. The disease, however, does not always advance in this gradual manner. Almost every physician, where it prevails extensively, has met with examples of fatal termination in the second, and, sometimes, in the first paroxysm. Still further, cases of the most simple kind, which, through several recurrences, have shown no sign of malignancy, have, under the unadvised operation of an antimonial emetic, or an active saline cathartic, proved fatal in the next paroxysm. When the dangerous or fatal paroxysm comes on, the functions of the whole body seem blighted.

"1. That of innervation is blunted and inactive. But little (and no acute) pain is felt in any part of the body; external applications are not much regarded, and even the cuticle, as I have seen, may be torn off, by rough frictions, without attracting the attention of the patient, although neither asleep nor delirious. The organs of special sensation are equally impaired. The intellectual functions, and the feelings, and affections of the mind, are passive; and the expression of the countenance is vacant or stupid. In some cases, a considerable degree of delirium supervenes; but in others, the faculties of the mind, almost up to the moment of dissolution, show nothing more than inactivity. Should there be some degree of delirium, the disposition to action will of course be greater. In many cases, however, the patient sinks into a coma, from which it is difficult to arouse him, and into which he immediately relapses, and continues until the paroxysm passes off, or he expires. These of course are the soporose, or apoplectic intermittents of systematic writers.

"2. The function of circulation is not less impaired than that of innervation. In comatose cases, the pulse is sometimes slow, full, and irregular; but in the majority of cases, it falls rapidly into a state of great feebleness, becomes extremely frequent, shrinks in volume, and finally assumes a thready and vermicular character. Before dissolution it often ceases altogether in the extremities; and has been known to be absent for a considerable length of time, in some cases, which have afterward terminated favorably.

"3. The function of respiration is impaired. The frequency and depth of inspirations is reduced; a sense of fullness in the chest is experienced; and sighing, with the restlessness attendant on embarrassed respiration, and an insufficient supply of air, supervenes.

"4. The digestive functions suffer not less, than those which have been named. The state of the tongue is various. Sometimes contracted and prismatic; but more commonly of its natural breadth and form; generally moist; frequently furred; occasionally red at the tip, but oftener pale and flabby. The appetite of the patient occasionally continues, in the intermissions, up to the fatal paroxysm; but oftener gives place to nausea and gastric irritability; which, on the access of the fit, may terminate in obstinate vomiting; when he sometimes throws up healthy bile, and now and then a fluid of a blue or greenish-blue color. In other cases the fluid ejected is acid. The number of cases in which a dark-colored liquid resembling the black vomit of yellow fever has been discharged, is so few compared with the whole, as scarcely to deserve a recognition; yet in Peoria, Illinois, I saw a patient of Doctor Rouse, who ejected a black liquid from his stomach a few hours before death. The bowels are sometimes torpid and costive; but in many cases there is a watery diarrhœa. Now and then, the matters thrown off have resembled the washings of beef; or water colored with indigo. Discharges of blood are exceedingly rare. Of the condition of the liver and spleen, otherwise than is indicated of the former, by what has just been said of its secretion, nothing special can be recorded. Many patients, however, complain of a sense of fullness and anxiety, through the hypochondriac and epigastric regions, and some, especially of the left side, apparently indicating great engorgement of the spleen; which is doubtless the case, for that organ has sometimes been found in a state of manifest enlargement, immediately after the recovery of the patient.

"5. The urinary secretion presents considerable variety. Some physicians have occasionally seen a great secretion of limpid urine, but in the larger number of cases, it is reduced in quantity, and sometimes the secretion is nearly suspended.

"6. The function of perspiration is, on the other hand, in most instances, greatly augmented—sometimes partial in its extent, more commonly general. The fluid discharged is watery, and may, almost, be seen exuding from the skin, which feels cold, inelastic and doughy; sometimes it is bloodless and pale, sometimes the extremities will assume a dark red, and the spots on which pressure is made will remain white for a time, indicating capillary stagnation.

"7. Lastly, the greatest reduction of energy is, perhaps, in the calorific function. The heat of the extremities, and occasionally of the integuments of the trunk and head, is signally reduced. It seems as if none were developed in the system, and as great exhalation is constantly going on, from the surface, external applications, both potential and actual, designed to raise the temperature of the extremities, very often produce no effect. In the midst of this reduction, the patient will neither shiver nor complain of cold, but on the contrary, if not deeply comatose, may declare that he is burning up within, and call incessantly for water. Every case, however, is not attended with this remarkable loss of heat. Those which manifest it most, must be classed with the algid intermittents of the systematic writers.

"A patient in the condition here described, must of course emerge from it in a short time, or die. He who might have the greater part of the symptoms, which, for the purpose of a full narrative, have been detailed, cannot, of course, be extricated. But a majority of them may be present, and yet recovery take place. In no other form of fever could this occur. In this, it results from the periodical and paroxysmal character of the disease. As the violent symptoms attendant on the cold stage of a simple intermittent, give place spontaneously, to those of the hot stage, which, in a few hours, as spontaneously cease, and are followed by a complete intermission; so there is, in malignant intermittents, a tendency to reaction and subsequent intermission; and these will occur in every case, in which the depression has not gone beyond certain limits, nor any vital organ sustained a lesion of structure or function, from which it cannot recover. To this inherent and inalienable property, we must ascribe, as to a *causa sine qua non*, the revival of the organism from its depressed and perverted condition: without it, the physician would neither have ground for hope, nor encouragement to effort."

The treatment of malignant intermittent *during the paroxysm* occupies several pages, in which the author considers the relative value of the measures and drugs, having most reputation. McIntosh's plan of *bleeding* during the paroxysm, the author thinks well of, but only in those cases in which the forces of the system are above that grade where the danger from exhaustion and collapse is not imminent. On the other hand he thinks there is a degree on the scale of vital energy, to which the functions often sink in the cold stage of this disease, which renders blood-letting not only inefficient, as a means of restoring the exhausted excitability, but causes the patient to sink more rapidly. *Emetics* that *a priori*, would seem adapted to such cases, in the general, may disappoint the expectations of the practitioner. They of course, occasion nausea, and this coincides with the downward tendency of the disease. Then, again, and this is especially true of tartar emetic, they are apt to turn upon the bowels, occasioning diarrhœa or hypercatharsis, which sinks the patient. *Cathartics* of a hydrogogue character, are regarded as inevitablely fatal; but calomel, blue mass, and stimulating cathartics, such as oil of turpentine, are not only admissible, but are thought occasionally to favor reaction. Stimulants, the agents that seem to be most positively indicated, in cases where they are most needed, often display no effect whatever. In those of a milder character they seem to assist the forces of the system in rallying from its benumbed condition. Besides the usual articles which are classed under this head, the author enumerates *heat* and *cold.* The first whether applied through the *media* of air, liquids or solids, often fails to be productive of any benefit. It warms the *surface* merely, but owing to the fact that the system under such circumstances is a bad conductor of heat, it fails to reach the calorific function so as to excite increased activity. Baths, extensive cataplasms, or the application of flannels, wrung out of hot fluids, and so covered with oiled silk, as to prevent evaporation, are the best modes of applying caloric. Too high a temperature, it should be borne in mind, tends to destroy the irritability of the muscular fibre, already greatly reduced in these cases. Some years since Drs. Feorn and Erskine of Alabama, suggested the *cold dash* as being in their hands the most valuable means of overcoming the torpidity of the system in cases of the character before us. The author thinks well of the practice in certain cases, and when sufficiently guarded to obviate the abstraction of too much caloric. Cold applied in the form of the dash, increases the irritability of the nervous fibre, it excites the function of innervation, and tends to restore the languid function of respiration. *Internal* stimulants of every kind have been administered; and there appears but little decided testimony in favor of any of them. Opium when there is wasting diarrhœa, and not contra-indicated by the state of the brain, is occasionally very precious in its effects. Quinine has been repeatedly and copiously prescribed during the paroxysms, but there is little or no testimony in its favor.

Treatment during the intermission of the Paroxysms.—This section is confined mostly to a consideration of the sulphate of quinine as *the* remedy to prevent the recurrence of the paroxysms. The following on the *quantity* and intervals of exhibition we insert:

"2. *Quantity and Intervals of Exhibition.*—When the sulphate of quinine was first introduced among us, it was given in one or two grain doses, in ordinary intermittents, and, seldom, in more than double that quantity, for the arrest of the most malignant. The periods of exhibition were every two, four, or six hours, according to the apparent gravity of each case. But although such portions might have proved successful in ordinary intermittents, they were soon found to be insufficient for the malignant; and the practice of giving the medicine, in what would once have been regarded as fatal portions, is now almost universal. Yet, even at an early period, a few physicians went far ahead of their brethren; and the late respectable Doctor Perrine, deserves to be named as one who, twenty-five years ago, in the State of Indiana, led the way in this bold medication. To make known the extent to which this medicine is prescribed by many of our physicians, and, also, to show, that in quantities far beyond the limits of ordinary practice, it does not occasion any permanent bad effects, I will mention the doses in which it is given by many of our physicians.

"On the southern shore of Lake Erie, Doctor Tilden, of Sandusky, told me he has given forty grains at once; Doctor Manter, and Doctor Howard, of Elyria, sometimes administer half or two-thirds of that quantity at a single dose, to be repeated every two hours, through the intermission. These gentlemen practice in the latitude of forty-one degrees and thirty minutes. At Memphis, near the thirty-fifth degree, Doctor Shanks administers the same portions, and has sometimes given twenty grains at once. Between the thirty-third and thirty-second degree, in Mississippi and Alabama, Doctor Young has given, in a single intermission, as much as fifty grains, in ten-grain doses; Doctor Davis, ten grains every hour, or every other hour; Doctor Dancy, from five to fifteen grains at once, repeated occasionally; Doctor Street, from ten to fifteen grains, in the same way; Doctor English frequently administers from thirty to forty grains in four or six hours; Doctor Echols, in anticipation of a paroxysm, took twenty grains at a single dose. The fit was averted, and perspiration came on, with a slow and full pulse; Doctor Sims often administers it in ten-grain doses, frequently repeated; and Dr. Boling regards that dose as rather large, though he has administered fifteen or twenty at once, and knew forty to be taken in one intermission. But the boldest exhibition seems to have been made in Florida, between the thirtieth and twenty-seventh parallels, by some of our army surgeons. The Assistant-Surgeon, Holmes, has administered twenty, fifty, and even eighty grains at once; and Surgeon Harney, one of the senior, and most authoritative members of the medical staff of our army, has given from thirty to sixty grains at a dose, and thinks the larger the portion the better. It is probable that so many of our soldiers are, or have been, intemperate, that they can bear, or may even require, larger doses than are demanded in private practice. To these facts, intended to show the upward limit of the sulphate in our Valley, and at the same time its harmlessness in large quantities, I may, in reference to the latter, add the following: A man in Cincinnati, by mistake, took two drachms of the sulphate, without injury; a patient of Doctor Sappington, of Memphis, Tenn., who had a relapsing intermittent, took eighty grains at once instead of taking it in eight doses, as ordered, but was not injured; Doctor Fair, of Montgomery, Ala., has told me of a patient, who took an ounce in three days, and recovered; and Doctor Hiriart, of Plaquemine, Louisiana, knew of an old lady, laboring under an algid intermittent, who took ten grain doses, every two hours, till an ounce was swallowed. No bad effects occurred and she recovered."

This summary, with respect to the administration of quinine in different latitudes, and under different circumstances, is interesting. It establishes the fact that the drug can be given in very large doses without exerting a poisonous influence. But, inquires the author, are the large doses mentioned, really necessary to arrest a paroxysm of malignant intermittent? He thinks not, and says that such is also the impression of the most careful observers. But in very violent cases, the practitioner is justifiable in giving the article very liberally—in quantities much above those usually administered. As an adjuvant to quinine in malignant intermittents, opium is favorably mentioned. In grave cases, four or five grains of opium is combined with eight or ten grains of quinine, and administered to the patient some three or four hours before the chill, it is said, scarcely ever fails to arrest the disease.

With reference to the amount of quinine proper to be administered, we incline to the opinion, that there are no rules that are applicable to all cases. The medicine has certain specific effects, among which is "ringing in the ears," which, when present, indicate that the system is under its influence, is intoxicated, and hence in a condition to resist the invasion of the paroxysm. Two grains administered every two hours, until 6 or 8 grains are taken, will in many cases answer the purpose, while in others in which the function of innervation is less active, twenty, forty, or sixty grains may be necessary to produce the same effects.

[TO BE CONTINUED.]

Carpenter's Principles of Comparative Physiology. With Three Hundred and Nine engravings. A New American, from the Fourth and revised London Edition. Philadelphia: Blanchard & Lea. For sale by Riley & Co. 1854. pp. 751.

To every one it is not known that this work differs from the well known one, entitled *Principles of Human Physiology*, by the same author; such, however, is the fact, and although the volume before us contains many of the cuts and some of the matter found in the work on Human Physiology, it contains a vast amount of matter of a different character, and a library is incomplete without them both.

The present work is not only a new edition of the original "Principles of Comparative Physiology" which was received with so much favor both in England and America, but the author states that the many discoveries which have recently taken place in comparative physiology have induced him to re-survey the whole science, and change the plan of the former work, so that in the new edition all the labors of observers in the various departments might find an appropriate expression.

It is useless for us, or any one else, to praise the work before us. It is only necessary that a student look over its contents to see that it abounds in the kind of matter that throws light on every department and aspect of Human Physiology. Much, indeed, of what we regard as being the most valuable in Human Physiology has been learned by investigating the structure and movements of inferior animals, in many of which the tissues, organs, etc., are developed in greater perfection, and on a more extensive scale than in man.

The following, taken from the first chapter of the work, we insert to show the character of the matter it contains:

"The first group of phenomena encountered by the Biological student, is that presented in the many hundred thousand diverse forms of organic structure, of which the Animal and Vegetable kingdoms are made up ; and it is necessary, at the very outset of the inquiry, to settle the principles upon which these are to be compared. In many instances, it is true there can be no room for hesitation ; the general type of conformation of two or more organisms being obviously the same, and the differences in detail never obscuring the resemblance between their component parts. But this holds good only to a very limited extent ; and we are soon forced to recognize such essential differences, alike in the general types of conformation, and in the form and structure of the component parts, that we feel the need of some guiding principle according to which we may arrange these phenomena for comparison. Now, from the time of Aristotle, downwards to the commencement of the present century, Anatomists were in the habit of regarding similarity in external form and in-evident purpose, a sindicating the analogies between different parts. But although this mode of estimating the character of organs is perfectly correct, when they are considered as *instrumental structures*—that is, when we are inquiring into the conditions of the function performed by them, it totally fails, when we are in search of the plan of organization, according to which their evolution has taken place ; since it is frequently found that two organs which are not unlike in external form, and which have corresponding functions in the system, originate from elements entirely different, and are therefore fundamentally dissimilar ; whilst, on the other hand, organs which at first sight present little or no resemblance to each other, and are applied to very different purposes in the economy, may be really modifications of the same fundamental components.

" If, for example, we take a cursory glance at the organs of support or motion in the air with which different animals are furnished, we shall observe a community of function, and a general similarity of external form, concealing a total diversity of internal structure, and of essential character. Amongst all the classes which are adapted for atmospheric respiration, we encounter groups of greater or less extent, in which the resistance of this element becomes the principal means of progression ; and even among aquatic animals, there are instances in which the function of locomotion is partly dependent on the same agency. Wherever *true wings* exist among the Vertebrata, some modification of the anterior member serves as their basis ; but there is a considerable variety in the mode in which the apparatus is constructed. Thus, in the *Bat*, the required area for the surface of the wing is formed by an extension of the skin over a system of bones, of which those of the hand form by far the largest part; and this membrane is extended also from the posterior extremity, and is attached to the whole length of the trunk, as well as to the tail, where one exists. In the *Bird*, on the contrary, the wing is formed by the skin and its appendages, attached to the anterior member alone: and here the bones of the hand are developed in comparatively slight degree, those of the arm and fore-arm being the principal support of the expansion. From what is preserved of the *Pterodactylus*, it seems that the wing of this extraordinary animal was extended, not over the whole membrane, as in the Bird, nor over the hand, as in the Bat, but over one of the fingers only, which was immensely elongated in proportion to the rest. In the *Flying-fish*, again, the pectoral fins may be regarded as, in some sort, its wings (though it does not appear that the animal has the power of raising itself by means of their action on the air, the impulse being given at the moment of quitting the water); these fins evidently represent the anterior members of the higher Vertebrata; but the bones of the arm and fore-arm are scarcely developed, while the hand is expanded, and joined immediately, as it were, to the trunk. A very different structure prevails among those imperfect wings, which serve rather to *support* the animals which possess them, in their movements through the air, than to propel them in that medium. Thus, in the *Flying-squirrels*, *Flying lemurs*, and *Phalangers* or "flying-opossums," there is an extension of the skin between the fore and hind legs, which, by acting as a parachute, enables these animals to descend with safety from considerable heights; in the *Draco-volans*, on the other hand, the wings are affixed to the sides of the back, being supported by prolongations of the ribs, and are quite independent of the extremities. Here, we have still the same function and general form; but it would evidently be absurd to say that the organs are of the same structural character. A still greater departure from the type with which we are familiar among the higher animals, is presented by the wings of *Insects*; for these are formed by an extension of superficial tegumentary membrane over a frame-work that is not derived from an *internal* osseous skeleton; but is an extension of the denser subjacent layer of the *external* integument; and this frame-work is penetrated, throughout its ramifications, by tracheæ of air tubes, communicating with those of the interior of the body, and also (at least in the early state of these organs) by vessels or passages for the circulation of the blood. As regards their essental structure, in fact, these wings correspond closely with the external respiratory organs with which certain aquatic Larvæ (as that of the *Ephemera*) are provided; and hence they have been not inappropriately designated by Oken as "ærial gills." They may, in fact, be regarded as an excessively developed form of those external appendages of the lower Articulata, which are subservient to locomotion and respiration jointly; and it is a very interesting example of the similarity of modification which very different plans of structure may undergo, when a common purpose is to be fulfilled, that, in the wing of the Bird, as well as in that of the Insect, there should be a special prolongation of the respiratory passages into the frame-work which supports it."

Manual of Human Microscopical Anatomy. By A. Kölliker, Prof. of Anatomy and Physiology in Wurzburg. Translated by Geo. Busk, F.R.S., and Thos. Huxley, F.R.S.; with notes and additions, by J. Da Costa, M.D. Illustrated by three hundred and thirteen engravings. Philadelphia: Lippincott, Grambo & Co. (For sale by Riley & Co.)

This work is designed as a hand-book to the student of medicine. Our science has now reached a point at which Microscopical Anatomy constitutes its foundation, quite as much as the anatomy of the organs and systems; and when a profound study of Physiology and Pathological Anatomy is impossible without an accurate acquaintance also with the most minute structural conditions.

The author in the work before us gives a very clear and condensed view of the relations of the elementary parts of the body, and of the more intimate structure of the organs.

Since Malpighi and Leeuwenhoek, early in the 17th century, broached the doctrine of the elementary structure of plants and animals, every generation has contributed its mite in the way of confirmation. It is, however, instructive to witness such minds as those of the 18th century, lingering over the discoveries and suggestions of the eminent individuals named, without being apparently able to take one step in advance, until the time of Bichat, who led off in 1801, giving to the world a classification of the tissues, a full account of their physiological functions and morbid alterations, thus laying the foundations of Histology. Bichat, however, seems to have paid but little attention to the revelations of the Microscope, and as a consequence was unable to perfect what all regarded in his day as a very brilliant logical generalization. In 1838, Schwann made his appearance as an investigator, and was the first who demonstrated the perfectly identical cellular composition of all animal organisms, and of the origin of their higher structures from these elements. His observations united all previous researches, and afforded the clue to further investigations. About the same time Schleiden made a discovery similar to Schwann's, with reference to the ultimate cellular structure of plants. It would require volumes to recount the influence of these discoveries upon every department of medical science. Much that was in dispute has been settled, and the fog which hung around many things has in a measure disappeared. Future research nevertheless has some things still to elaborate. It would be very desirable to have a little more insight into the molecules which constitute the cell membranes, muscular fibrils, axile fibres of nerves—the laws of their opposition, the alterations which they undergo in growth and decay, &c. Then, again, it appears to be admitted on all hands, that cells are histologically the same, but teleologically different. How is this? How does it come that, all cells being alike at first in structure, become so changed as to give rise in one instance to a liver, in another to a brain, in another to a bone, and in another, as is the case occasionally with those liberated from the ovum, to a fœtus? Just here we want another Malpighi, Valentin, or Schwann. As a specimen of the work, we insert the following:

"As regards the general propositions of Histology, the science has made no very important progress since Schwann; however much has been attained by the confirmation of the broad outlines of his doctrine. The position that all the higher animals consist at one time wholly of cells, and develop from these their higher elementary parts, stands firm, though it must not be understood as if cells or their derivatives were the sole possible or existing elements of animals. In the same way, Schwann's conception of the genesis of cells, though considerably modified and extended, has not been essentially changed since the cell nucleus state remains as the principal factor of cell development and of cell multiplication. Least advance has been made in the laws which regulate the origin of cells, and of the higher elements, and our acquaintance with the elementary process which take place during the formation of organs, must be regarded as very slight. Yet the right track in clearing up these points has been entered upon, and a logical investigation of the chemical relations of the elementary and of their molecular forces after the manner of Donders, Ludwig and others, combined with a more profound microscopical examination of them, such as has already taken place with regard to the muscles and nerves,—further, a histological treatment of embryology, such as has been attempted by Reichert, Vogt, and myself, will assuredly raise the veil and bring us step by step nearer to the desired, though perhaps never to be reached, end."

In conclusion, we cordially indorse this book as one that can be obtained at a slight expense, compared with what productions of the kind have heretofore cost, and that is indispensable to every physician's library.

Notes of M. Bernard's Lectures on the Blood, with an Appendix. By WALTER F. ATLEE, M. D.

This little book purports to contain the opinions of Messrs. Bernard and Robin, of Paris, concerning the anatomy and physiology of the blood, as delivered in their lectures during the last winter, and reported by the editor. Their oral instructions were amply illustrated, and, in fact, were possibly modified by their numerous experiments and vivisections performed at the time before the class. Their opinions were duly noted down by Dr. Atlee, in no very clear order, in his note book, and are now published. Some care in the arrangement of the subjects in proper order, and in keeping distinct the different topics touched upon, would not have been amiss in any editor, especially in one who merely transcribes the teachings of others. Still more inexcusable is the want of an index. Nevertheless, the guests are worth entertaining, however clumsily introduced to our notice. We feel thankful for their company, and shall treat them as handsomely as may be in our power.

M. Robin occupies most of the appendix, and confines himself to the anatomy, strictly speaking, of the blood and blood vessels, and parenchymatous organs of the body. These, interesting as they are, we must pass over, merely remarking that they will well repay perusal and careful study by those who pay special attention to microscopical pursuits. We have merely space and time to indicate some of the results arrived at by M. Bernard, whose experiments in every department of physiology are already so widely known and appreciated.

The blood is composed of a solid and a liquid portion—globules and serum. *Globules* include blood corpuscles globulins, and fatty particles, all of which are held in suspension in the serum ; besides these, air bubbles and various animalculæ have been observed, as in the dolphin, and frog, and the strongylus in Aneurisms. The yellow blood globules are found in all blood. They are increased in number within the liver, being more numerous in the hepatic than in the portal veins. Their color is dependent upon a principle contained within, which exudes in certain apoplectic clots, leaving the cell-walls of the globule entire. White globules are much less numerous ; they are also increased by the passage of blood through the liver ; they are not the parent cells from which the other (yellow) corpuscles are formed.

Fatty particles are found especially in the right ventricle. Fat is altered by the lung—if introduced into the portal system it is deposited in the liver. Fat is found when no fat is eaten, as in animals who had not eaten for eight days. The fat of the body is consumed. *Chyle* is also found during digestion. In animals this can be proved by selecting the time of experiment.

THE SERUM includes fixed constituents, which can always be found, and fugitive, which are present in order to be eliminated from the system.

The fugitive are

Urea and Uric Acid, only recently detected, as always present in the blood. In 6 lbs. some may be found. In the ox, hippuric acid is discovered. When the kidneys, the organs of elimination for those substances, are removed Urea and uric acid are found in the stomach, the blood still being feebly charged with them.

Carbonic Acid is eliminated by the lungs. If a certain amount be breathed, and thus enter the arteries, life is destroyed ; yet a much larger quantity may be injected into the veins, whence it passes out by the lungs with impunity.

Sugar is found in proportion of 1 per cent. When in larger quantity, the excess is carried off by the kidneys, otherwise the lungs eliminate it. Lactic acid is an intermediate form. Sugar is formed independently of the sugar introduced from without—the liver being the factor ; it is made at the expense of the blood, which incessantly traverses that organ. Animals fed on fecula and gelatine, produced sugar, but those fed on fat alone did not have more than if nothing had been given. In carniverous animals azotyzed substances contribute to its formation, azote being eliminated with the bile. In the hepatic vein the quantity is about 1.50 per cent., 2 per cent. being the highest ever seen. The quantity is increased by irritating the nerves supplying the liver, and altogether suspended by their section. In herbivorous and carnivorous animals the proportion of sugar is identical.

The *fixed constituents* include albuminoid principles, oxalmine, and anoxalmine. Fibrin and albumen are constantly found. M. Bernard thinks they can be transformed one into the other. Fibrin is destroyed to some extent by the liver, the proportion being related to the bile and sugar formed. It exists largely in the portal, and hardly at all in the renal veins.

Inorganic matters are found in both solid and fluid portions of the blood, viz: iron, which, like fibrin, is diminished by the liver; potash and soda; chlorides in the serum, but feebly in globules; phosphates vice versa. Maganese and copper have also been discovered.

Gases are chiefly absorbed by the globules.

The blood is divided into venous and arterial. The change takes place in the lungs—from the latter to the former in the capillaries. Both are essential to life. In animals exposed to carbonic acid or carbonic oxide, death is equally speedy, though the former causes all the blood to resemble venous blood and the latter arterial blood. Venous blood varies in the constituents in different situations. It is only found perfect in the right ventricle. Arterial blood is every where the same, and is the vital fluid conveyed by the pulmonary viens from the lungs which supplies, to the heart which propels.

The changes that occur in the transformation, &c., of elements in the blood, M. Bernard considers due to fermentation.

The movements of arterial blood result from pressure of the arteries—impulse of the heart causing pulsation and respiration. Arterial pressure is every where the same in proportion to the amount of fluid contained. That which occurs during digestion produces the turbid urine seen at that time in animals. It is not troubled during abstinence.

Cardiac impulse is felt in inverse proportion to the distance from the heart.

Respiration, when rapid, increases the rapidity of circulation. When the breath is held long, as some have the power, the arteries can be emptied, and thus no pulse perceptible for a time.

Temperature is uniform in the arteries, but varies in the veins. In the liver it is one degree warmer than before its entrance. It is warmer in the veins than in arteries—in the right than in the left ventricle, contrary to the received opinion. The experiments on this point are very elaborate. The capillaries (not the lungs) are the sources of animal heat.

As to the *quantity* of blood in the body the experiments of Valentin are repeated. Digestion increases—starvation decreases it.

The *rate* of the circulation may be augmented or decreased by agents, as alkalies and acids—the former accelerating, the latter retarding it.

The blood is decidedly alkaline in its reaction.

Fermentation takes place readily in the blood on the application of yeast and sugar.

The *Albumen* appears to suspend the laws regulating certain bodies in blood, thus copper is held in solution, although alkalies precipitate it without the presence of albumen. Lactate of iron and cyanuret, injected into the jugular veins of living animals, did not form Prussian blue in the blood, but in the intestines and excretions. When the albumen was destroyed a splendid blue was formed.

The influence of the nerves on the blood is alluded to fully.

Section of the pneumo-gastric diminishes the respiration and animal heat, but increased the rapidity of the heart's pulsations.

Section of nerves (the Par Vagum especially) diminished the pressure of the arteries, so the heart varies as the anterior or posterior root of the spinal nerves are interfered with.

Section of the nerves supplying the liver arrests the formation of sugar, while irritation increases it.

Section of the Sympathetic causes increased vascularity, which disappears to a certain extent after a while, and greatly increased animal heat, which persists. The experiments confirming this are taken at length from a paper read by M. Bernard before the Biological Society of Paris.

The vital characteristics are:

Coagulation, connected in some way with respiration, not necessarily related to the proportion or presence of fibrine. Renal blood, which has no fibrine, coagulated. Section of the Sympathetic in a horse caused a coagulum to form much more rapidly than usual, yet diminished quite remarkably the amount of fibrine.

Regeneration. An animal bled to syncope one day, has the same apparent amount of blood the next. Still more marked is this quality in fibrine, which is increased at every successive bleeding from the same animal.

We are obliged to pass over many topics of interest without remark, but we trust we have said enough to show our readers the important and interesting nature of the subjects the book professes to treat upon. To the earnest student of Physiology its teachings are highly suggestive. R. G.

Transactians of the American Medical Association, Vol. VII. 1854. New York: Charles B. Norton, 71 Chambers street.

This volume is less in size than several of its predecessors, though its contents are highly interesting, and in mechanical execution is very good.

It commences with the address of Usher Parsons, Vice President. Then follow the report of the committee on Medical Education, reports of the different committees on the Epidemics of Kentucky, Tennessee, Ohio, Indiana, Michigan, Louisiana, Mississippi, Arkansas, Texas; a paper on Erysipelas, by R. S. Holmes, M. D., of St. Louis; a Prize Essay, by D. Brainard, M. D.; an Essay on the Toxicological properties of cryptogamous plants of United States, by E. P. Porchar, M. D.

The report of E. D. Fenner, M. D., on the Epidemics of New Orleans, during the last year, is a very valuable paper. We have no space now for an analysis of it, but cannot pass over the *mortuary table* without a passing notice.

This table shows the mortality from *all causes*, to be 15,633. Of this number 7,849 were from yellow fever. Only 142 of these occurred previous to the month of May; 1,482 in the month of July; 4,962 in the month of August; 740 in September. In regard to *sex*, it appears that 5,309 were males, 2,496 females—leaving 44 unascertained. With respect to *color*, 7,811 were *white*, 38 *colored*. The *nativity* was imperfectly ascertained. It was made out, however, in 3,993 cases; 344 of these were born in the United States, 3,649 in foreign countries—Ireland, Germany and France furnishing almost the whole number.

Estimating the population of New Orleans at the time that the epidemic broke out, at 120,000, we find that the mortality was, during the past year, about 6 per cent., or 1 in 16.

The report further states that at the time the pestilence broke out, the city was in the *filthiest* condition that it had been in for some time—that the first cases occurred in persons who had been there but a short time; that no vessel from any foreign port brought any cases of yellow fever into the city previous to those which originated in it; that the disease was the same that prevails to a greater or less extent every year, but much more malignant; that all the varieties of *endemic* fever which prevail throughout the Southern country, were seen in the midst of the epidemic and interchanged type with it.

Here are statistics and facts in regard to one of the most formidable diseases that afflict and destroy humanity, over which the medical philosopher may well ponder. How does it come that the disease exhibits such a preference for males over females? And why is it that negroes are almost entirely exempt? With respect to the former question, we shall not at present venture a reply; to the latter, we hazard the opinion, that the climate was made for negroes and not for whites. The former do well in it under all circumstances, even, as the statistics show, during the prevalence of the most malignant epidemics—the latter drag out a stunted existence under the most favorable circumstances, and when endemics prevail, are swept off by the thousand. Acclimation is talked of. What is it? Out of an hundred that go from the Northern States to reside in New Orleans, a few escape the pestilence. This only proves that the few have organizations that can resist any thing, even the poison of yellow fever. The climate, indeed, has its archetype in Liberia and other portions of Africa, where notwithstanding all the efforts that the Caucassians have made to become acclimated, still the enterprise is perfectly abortive. Even negro veins seem to be no protection to Caucassian blood. Mulattoes do but little better than whites.

PART FOURTH.

EDITORIAL AND MISCELLANY.

Malarious Fever and Cholera combined.

During the past summer and fall, we have witnessed a number of cases of fever in our city, mostly confined to the western and northern parts of the city, that exhibited rather an uncommon series of phenomena. The disease was evidently of malarious origin, and generally of the intermittent character, though some cases were remittent in the commencement, and maintained this form throughout their course, assuming, after a few days, a typhoid tendency.

Fever, of a malarious character, when well defined, as all know, has a distinct cold stage, hot stage, and sweating stage. This order in the cases we have under consideration, did not usually obtain. *Perspiration* copious, sometimes wasting, made its appearance, apparently at the onset, like we have frequently in connection with visceral inflammation, and after continuing for a week or ten days, it would cease and the skin become dry.

The digestive organs were always much deranged. Vomiting alone, or connected with diarrhœa, was by no means unfrequent. Cases thus characterized in their commencement were quickly prostrated. This was especially true if the diarrhœa and cold stage of the fever came on at the same time, a circumstance of very frequent occurrence. It was supposed by some, whose observations were entitled to respect, that the diarrhœa often stood in the relation of effect to the chill or cold stage. The recession of the blood from the surface to the deep seated organs, it was thought, favored the tendency to watery effusions into the alimentary canal, and as a consequence, the diarrhœa.

Another feature not usually seen in this climate in connection with fever of any kind, was *jaundice.* The skin in a number of cases commenced getting yellow at an early stage, the hue increasing in intensity as the complaint advanced, until the entire surface and the eyes were as highly colored as in genuine cases of yellow fever. As the febrile orgasm declined, and sometimes before, the skin assumed the dark brown appearance familiarly known as "black" jaundice. This in some cases continued for weeks after the principal force of the complaint had been subdued. It was no uncommon thing to find the skin in this form of the complaint covered with perspiration —sometimes copious.

From what we saw, the termination of a majority of the cases when rightly treated, was favorable. The mortality that obtained, was confined mostly to those patients who either had, or were predisposed to diarrhœa. This, coming on simultaneously with the chill, produced a series of phenomena and results, such as very much resembled cholera; and indeed by some, these cases were regarded as cholera. The pulse diminished rapidly in force, the skin became bloodless and shrunken, the urine scanty, thirst urgent, the voice husky. Death took place occasionally during the cold stage, and sometimes as early as the second or third paroxysm, usually, however, not until later.

In the treatment of cases not complicated with diarrhœa, but with a skin intensely yellow, it was our practice to evacuate first passages and then commence the administration of quinine. This practice proved to be applicable to patients where the febrile excitement had a distinct intermission, but in those where there was only a slight *remission*, the quinine seemed useless. These latter very soon assumed the adynamic type, and were most successfully conducted through their course by medicines calculated to purify the blood and increase the strength of the system. The cases complicated with copious watery discharges from the bowels, required quinine, opium, astringents. The secret, indeed, of curing this form of the disease, consisted in restraining, at the time, the peristaltic movements of the bowels, and preventing the recurrence of the paroxysms. These being checked, some patients soon recovered, while others in whom perhaps the impress of the poison had been more intense upon the nervous centres and mucous surfaces, became typhoid, (we know of no better name for the condition,) and continued in this state for weeks, betraying most of the phenomena usually characterizing a case of idiopathic typhoid fever.

How are the leading features of cases, such as we have described, to be explained? We know of no other way, than by supposing them due to highly concentrated malaria, and the causes of cholera combined. The malarious influence evidently predominated, and impressed itself most positively. Still, intense as it was in many cases, it was only when it was combined with the wasting discharges from the bowels, that we had much mortality.

Death of Dr. Golding Bird.—For some time Dr. Bird has labored under disease of the heart, and in June last he was compelled to retire from business. He died on the 27th Oct. at Tunbridge Wells, at the early age of thirty-eight. His last illness was complicated with prominent disease of the kidney, and it is said that this was the immediate cause of his death. Thus, it seems he fell a victim to a malady, to the elucidation of which the greater portion of his life had been devoted, and in the diagnosis and treatment of which he had been one of the greatest authorities.

Old Fogies.—In these days of progress, an individual who so far mistakes his "chief end" as to betray the possession of a portion of that old fashioned faculty called *caution*, with reference to any of the new schemes, projects, or doctrines of the day, has his movements about as carefully watched, and his traits as much commented upon, as if he were about to invade the country with the army of a Xerxes. Should he find it necessary to exhibit any especial care in regard to the many discordant systems of medicine which have been showered upon us with such profusion from various parts of the world, he is, like as not, styled an "Old Fogie;" or should he suggest that new things should be submitted to the crucible of experiment, before being adopted into general use, he will most probably be called an old empty-pated "wheel-hoss," good for nothing but that of holding the race back from the triumphs that await us in the future. Progress, go-a-headativeness, every now and then seems to come on our race in paroxysms, and as long as the paroxysm lasts, those who are careful in the exercise of discretion and judgment with reference to what they believe and practice are compelled by the usages that obtain to go into a state equivalent to hybernation, until the progressives, intoxicated with errors, absurdities, transcendentalisms, etc., are compelled to halt and ask for consultation.

This, we imagine will soon take place with reference to a number of medical men, who, by influences of various kinds, have succeeded in holding a connection with the medical profession, while, at the same time, they have been engaged in sowing broadcast over the land, doctrines, that in sober times, would secure places for them in a Lunatic Asylum. We refer to such men as Henderson, who, while Professor of Pathological Anatomy in the University of Edinburgh, Scotland, makes use of his leisure to disseminate doctrines which, for absurdity, have no parallel in the records of delusion. The paroxysm, we hope, for his sake, will soon pass off. For Edinburgh, the former Athens of Medical literature, to allow a man to give currency to such stuff as Homœopathy, while, occupying one of the most important chairs connected withth eexposition of scientific medicine, is evidence that the sceptre ofintelligence no longer graces the theatre of a Denman, a Gregory, a Cullen, and an Abercrombie.

MORTALITY OF THE WHITE AND BLACK RACES IN THE UNITED STATES.—The Census Bureau at Washington have published some tables exhibiting the comparative Mortality of the White and Black Races in the United States.

This table exhibits some facts of no little interest to the ethnologist. In seems that the blacks have a much greater longevity, both general and extreme than the whites, in the slave-holding States; and the difference between the two races in point of longevity, would be still greater in favor of the black, than is represented by the table, if the comparison were confined to the more *Southern* States, such as Louisiana, Alabama, Mississippi, South Carolina, Florida, &c. How are these facts to be explained? Will it do to account for them by the exemption of the negro from care, the lightness of his labor, the physical comforts enjoyed? Or should the character of the climate be invoked?

RESIGNATION OF PROF. GIBSON.—The resignation of Prof. Gibson, who occupies the chair of Surgery in the University of Pennsylvania, a position he has long held with great credit to himself, and usefulness to the Institution, is confidently expected to take place in the spring, and, as a consequence the gossips are upon tip-toe to see who is to succeed him. Some surmise that the Trustees, will select from the material in their own city, others think they will come West. To the latter we ask the liberty, in advance, of entering our protest, unless they will take some man from among us not over fourteen hands high. There have been trials enough of our good men already made to demonstrate the general fact that they do not suit East. The late Dr. Drake was perhaps the first medical man invited from the West to take a chair in an Eastern school. He accepted, but only stayed to deliver one course. Others have tried the same experiment, and became satisfied with its incorrectness. There are plenty of Eastern men who could fill the chair, as well as Prof. Gibson has done, and who would be glad of the appointment. In all sincerity, we say, appoint one of them. But it may be said that we have some in the West of more reputation than any that can be found in the Eastern States. Well, granting this to be true, we need just such men here. We expect soon to have a population in the Mississippi valley compared with which all that can be maintained on the Atlantic slope will sink into insignificance, and, as a consequence, we shall want all the ability that can be commanded to educate young men to take charge of their diseases.

Scarcity of Medical Students.—As far as we have been able to learn, there is a diminished number of medical students now in attendance at most of the Colleges in the Mississippi valley, and also on the Atlantic slope. What is the cause of this ? Is the taste for medical studies subsiding, or has there any thing sprung up to attract the material out of which doctors are made, to other pursuits ? Or have young men felt, in common with the rest of humanity, the dearth in money matters ? Perhaps all of these combined, produced the result—guess they have. As a consequence of this state of things there must be a lack of physicians in many regions to meet the wants of society. This will be the case more especially at those points where so many have, during the past season, fallen victims to the epidemics which prevailed.

"Take the Bull by the Horns."—The above is a maxim of importance in many things connected with human pursuits; but, perhaps, in none is its observance more useful than in the studies connected with medical science. Every thing in which we engage, has something about it that is of primary importance, that is, a kind of fulcrum upon which all other things turn. The business man's fortune turns upon his industry and tact; the clergyman owes his success to his piety and ability to make the doctrines he inculcates, popular and practical; the statesman his, to the knowledge he possesses of the principles of political economy, national dignity, and the relations of the country to other governments. One, therefore, who aspires to any of the positions indicated, will find himself in the vocative, unless he has thoroughly canvassed these elements of success, or in other words, taken "the bull by the horns."

The pursuits of medical men constitute in the general no exception to the principles suggested. Their success, as it can easily be made out by reference to the lives of those who have distinguished themselves in ancient and modern times, depends not upon chance, friends, or favorable circumstances, but upon calculations, which take into consideration the nature of the difficulties to be overcome and the adoption of those modes of procedure that have never yet failed to produce the desired results. If we were to attempt allusion to these, we could not omit to mention the necessity of cultivating regular habits—temperance in eating and drinking, the observance of proper hours for study, for rest and for relaxation. To accomplish any thing with the mind, is next to impossible, unless the body be in a physiological condition "*mens sana in corpore sano.*" A sound mind in a sound body, is a maxim as true as it is old, and one, too, that has had character in every age of the world. We are aware that examples can be adduced, of individuals who have figured in the world, and who were of irregular habits. Burns, and Byron, and Abernethy, are familiar examples. These, however, scarcely constitute exceptions to the rule, for although uncommonly gifted with certain traits for which they found in the public mind of their day a great relish, each one of them nevertheless died prematurely, without, indeed, accomplishing one half of what they might have done, if their lives had been characterized by proper habits. The truth is, the physical of our composition is surrounded by consuming elements, the effects of which we are only able successfully to resist, by strict conformity to physiological laws, laws that promote its continuance and growth. Violate these, and disease or death will as certainly ensue, as effect follows cause.

Another matter that should enter into the calculation of those who wish to be any thing, is, that labor—systematized labor—is not only necessary, but indispensible. Knowledge does not come by intuition; nor by the feeble enervated efforts of the drone; nor by the divided attentions of the man of pleasure—but by faithful, unwavering perseverance of the student. He alone can successfully knock at the door of the Temple of Science, and not merely pray for admittance, but *demand* it.

The following books have been received, and are on sale at Riley & Co.'s Bookstore. They will be reviewed in our next number:

Manual of Pathological Anatomy, by C. Hanfield Jones, M. D., and E. D. Sieveking. (Lea & Blanchard.)

Child-Bed Fevers. By C. D. Meigs, M. D. (Lea & Blanchard.)

Wilson on the Skin and Hair. (Lea & Blanchard.)

Principles of Animal and Vegetable Physiology. (A popular Treatise.) By J. S. Bushnan. (Lea & Blanchard.)

Owen on the Skeleton and the Teeth. (Blanchard & Lea.)

West on the Os Uteri. (Lea & Blanchard.)

Diseases and Injuries of Seamen. By G. R. B. Horner, M. D. (Lippincott, Grambo & Co.)

Sickness and Mortality of Emigrant Ships.

Dr. Beal, the dentist of Philadelphia, lately convicted of an attempt to destroy the virtue of a female who he had put under the use of chloroform for the purpose of extracting a tooth for her, is now in the Philadelphia county prison, and is allowed to officiate as an assistant in the apothicary's department.

During the course of Dr. Beal's trial, and subsequently, some rather knotty questions sprung up with reference to the effects of chloroform. For example, does chloroform, besides producing anæsthesia, or insusceptibility to pain, suspend also consciousness? Such has been the general impression among medical men. Granting this to be true, what is the testimony of an individual under the influence of chloroform worth?

A very good definition of primary insanity is inability of the individual to control his thoughts. This is the point of departure in every case. How does this compare with some of the principal effects of chloroform, those for example that relate to the mind? Among the effects which we first see, are aberration, incoherrence, and trains of thought passing through the mind on other things than those with which it should be occupied at the time, denoting that the will and the ability to voluntary actions have been suspended. What name, then, more proper for the condition of a person under the influence of chloroform than *insanity*—temporary insanity? Dr. Beal's sentence may be just, but unless we see something more conclusive than the testimony of an individual under the influence of chloroform at the time she alleges the injury was sustained, we cannot restrain doubts.

Clinical Notes on Surgical Cases. From the Clinical Lectures of E. M. Moore, M. D., Professor of Surgery, Starling Medical College. [Reported for the *Journal.*]

We intend to lay before our readers, from time to time, extracts from the clinical remarks of Dr. Moore, the Professor of Surgery in Starling Medical College. To report all the interesting cases that occur, or the remarks predicated thereon, would fill the *Journal,* to the exclusion of other matters. We prefer, therefore, to condense our subject, and present such observations as refer to the more practical points in Surgery. It will be apparent that the following is but a summary of what is said on any given topic, and does not profess at all to be a verbatim report.

Diseases of the Eye.—Entropion was illustrated by cases showing the incipient and advanced stages of this affection. This disease consists of an inversion of the eye-lids, whereby the hairs rubbing upon the cornea, excite inflammation and consequent opacity. This, if not relieved, may terminate in partial blindness, more or less severe. Blindness is not apt to be perfect unless ulceration of the cornea should be a sequence of the irritation. The operation that is usually performed consists of the removal of a portion of the skin from the eye-lid, taken as near the edge of the Tarsus as can be done and still allow opportunity for the use of a suture. The amount of skin to be removed is usually more than a young practitioner would be disposed to think necessary. The test of what is requisite must be made before the excision, by grasping it in a pair of forceps, and while the patient elevates the lid to open the eye, the direction of the ciliœ is to be made as nearly normal as possible. The excision can then be easily performed, by following the lower edge of the forceps, which grasp the skin, either with the scalpel or scissors. This gaping wound must then be closed by fine interrupted sutures. It is probable that the hairs have taken on irregular attitudes, as is shown in one of the cases operated on, and if the general direction of the ciliœ and edge of the lid be normal, those which persist in still turning backwards on the cornea must be extracted. The removal of hairs, however, must be abstained from as much as possible, for their frequent extraction tends to produce an increased irregularity of growth. Still, if the edge of the lid is restored to its proper position, a hair which is of a full length, presses at present on the cornea when it is again developed from the bulb, may turn away and assume its normal position. I know of no operation upon the eye or its appendages, which is followed by so much relief in proportion to its severity and danger, as the one performed in this manner; for the removal of the exciting cause thus easily obtained in most cases, without further treatment of the inflammation of the conjunctiva, results in an entire cure, and in the course of time the absorption of the effusion which has produced the opacity. Yet it must be confessed that these deposits are sometimes permanent, and when not so are frequently assisted in their removal by proper medication.

FISTULA LACHRYMALIS.—The case which presented itself is of two years standing. "It presents," said Dr. M.. "the fluctuations so common in this disease. He has come for relief in the early part of this winter in consequence of the increased annoyance to which it gives rise. During the summer theinflammation was less than during the preceding winter, both in the nasal duct, canaliculi and conjunctiva of the eye-lid. At present the skin upon the cheek is not open, and, therefore, the fistula at present does not exist, but he has had, as is usually the case, an active inflammation of the lachrymal sac, and an ulceration by which its contents have been discharged. This, however, had closed over, and now is presented the swelling of the lachrymal sac indicated by a tumor. Within a short period, fluid has passed down into the nose, rendering it probable that the canal is not entirely destroyed, although it appears to be closed. This closure takes place from merely thickening of mucous membrane, the result of inflammation, as it can not enlarge eccentrically in consequence of the bony canal, its epithelial surfaces being pressed against each other so firmly as to prevent the passage of fluid. It is, of course, desirable to relieve this obstruction without a resort to such an operation as will destroy the mucous membrane lining the canal, and during the acute stage the ordinary antiphlogistic remedies, especially the abstraction of blood by leeches, are frequently sufficient for its cure. This is more apt to be true if the decline of the disease is immediately followed by warm weather. If the inflammation becomes chronic, however, these remedies alone usually fail of their design. It is now necessary to bring in contact with the membrane those astringents which are usually found beneficial, to othther mucuous surfaces. Of these, perhaps, nitrate of silver, of mild strength (from 2 to 5 grains to the oz. of distilled water) may be regarded as the most efficacious, but it must be recollected that such remedies must be alternated with each other in order to obtain their greatest efficacy. Solutions of acetate or sulphate of zinc, acetate of lead, and sulphate of copper, may also be used. These can not be brought into contact with the membrane of the duct unless the canaliculi are pervious. This is usually, though not always, the case, and by dropping the solutions in the corner of the eye, they are removed by the natural apparatus and deposited in the lachrymal sac, and although at first they may not pass into the nose, the constant impression of the astringent is apt to diminish the thickening of the membrane so as to produce a gradual opening of the passage. It is unfortunately true that this plan is not ordinarily successful, and then a resort to surgical procedure becomes necessary. Dilatation may be effected sometimes by catheterism. In this patient an incision was made into the sac, and a very delicate whalebone probe passed into the nose by careful and continued manipulation. This was succeeded by a fine probe cut from the bark of slippery elm, which has the advantage of dilating in an exceedingly gradual and uniform manner. At the end of twenty-four hours it doubles or even trebles its diameter, and a silver style of moderate size may take its place without any cutting operation. The dilatation can not proceed without exciting some acute inflammation, which ordinarily subsides by poulticing. If the dilatation be sufficient, a well polished style should be introduced of silver, gold, or platinum, for the inflammatory symptoms are more likely to subside, in consequence of their smothness. This instrument, ment, or a tube of the same material and form, must probably be worn during the winter, for the cold will hardly allow the inflammation to disappear altogether, but when spring comes it should be removed for a day and then replaced, again removed after a short interval for a period of two days, and thus on, making the intervals a little wider until its use is entirely dispensed with. This may not be successful, for the closure may be so rapid and so great as to render its permanent use necessary.

Club-Foot.—Several cases of this deformity have been presented for treatment. They were all congenital, which, as the Professor remarked, although the usual is by no means the necessary origin of this difficulty, for these deflections of parts arising from muscular contraction in different portions of the body may frequently result from some unknown cause—most probably from nervous derangement, inasmuch as it is found to succeed convulsions and other nervous diseases, especially during first dentition. The foot may be deflected in any direction from its normal position, receiving the various technical names of—*Varus,* when turned inward; *Vulgus,* when turned outward; *Talipes equinus,* when the heel is raised and the foot turned forward; and *Talipes calcaneus,* when the toes are raised and heel projected. All these cases belonged to the first variety, with the exception of one (Talipes calcaneus), which existed in a child with Spina lifida. In connection with this it was stated by the lecturer that different vices of formation are apt to occur in the same subject. These deflections sometimes resulted from extensive contraction of a muscle without disease, consequent upon paralysis of its antagonist. This is usually the case in Talipes calcaneus. The operation in these cases of Varus consisted in every instance of the division of the *Tendo Achillis* only, and Dr. M. remarked that although in some of them the deflection was sufficient to bring the weight upon the back of the foot, he did not consider it necessary to divide any other tendon when the patients are below two years of age, and not often even above that age. In none of these cases was it advisable to cut the plantar fascia, as must be done when the foot is very much bent upon itself.

The operation was performed on the *Tendo Achillis* by sub-cutaneous puncture with a slender, sharp pointed knife, which was entered on the inner side of the leg, between the skin and tendon, and carried flat-wise until the point projected beyond the tendon. It was then turned at right angles to its former position, so as to bring the edge of the blade in the tendon. The foot, which had been previously extended by an assistant, was now flexed so as to render the tendon tense. The knife, with a slight sawing motion, readily divided it, leaving a cut in the skin of not more than $\frac{1}{8}$th of an inch in length. The necessity of this delicate puncture was here insisted upon, in order to insure exclusion of the atmospheric air. The fears of Surgeons when the operation was first proposed, were alluded to. Accidental wounds of the *Tendo Achillis,* accompanied by a free opening of the skin, so that a granulating wound usually resulted, and the tendon, with its low vascularity, had too often, by sloughing, caused permanent lameness, but a sub-cutaneous excision of the fibrous tissue seemed to be as free from hazard as any surgical operation ever proposed. Equally groundless are the fears of traumatic Tetanus, which were formerly entertained. No such result had been reported, and he (Dr. M.) had never witnessed a single uncomfortable symptom following any such operation in his own practice.

The puncture should be made internally to the tendon, so as not to expose the posterior Tibial artery to the point of the knife. The apparatus for restrainining the foot should be applied immediately, as was done in all the cases under consideration, and the patients not allowed to walk under a fortnight. He (Dr. M.) has entirely abandoned the use of Shomeyer's board, and depends entirely upon the shoe which the patient must wear for walking. Shomeyer's plan of allowing the tendon to unite, with the foot in its original position, and stretched at the end of four weeks, had been abandoned entirely by surgeons. Dr. M. enforced strongly the necessity of wearing the apparatus constantly, and that the operation would be of no avail unless it was applied. Indeed, the apparatus alone, independent of the operation, would be sufficient for a cure, but the operation facilitated treatment so much, both as regards pain and time, that no case where the deflection is much, should be undertaken without it. The operation may be performed at almost any age—the rapidity, and, indeed, the prospect of perfect cure is much greater during infantile life. It is better, however, to postpone the operation until the third month. In the adult more numerous incisions are necessary—the plantar fascia usually, and often the Peronial or Tibial tendons. In cases of moderate deflection, even in the adult, the wearing of the apparatus alone is sometimes sufficient. In one case (a girl of 12 years) under Dr. M.'s care, the deformity yielded to treatment by the apparatus alone in about three months. In another patient (a young man about twenty-one years of age), where the axis of the foot was turned inward at an angle of 45°, division of the *Tendo Achillis* alone enabled the apparatus to effect a cure in about four months. It is necessary when the apparatus is to be abandoned that it should be done gradually, wearing it every other day for a month or two, and then every third day, and so on, increasing the interval until it is dropped. The case should be carefully watched by the surgeon, during the progress of the treatment, for it constantly happens, even among intelligent people, that slight derangements of the apparatus will occur, which, being overlooked, will render it of no avail, although conscientiously applied. The mother of the infant patients should be made to promise to keep the apparatus faithfully applied, for the first two or three weeks, during which it may be troublesome to the patient. At the end of this time all inconvenience from wearing it is usually passed by, and the child, instead of crying when it is applied, feels the support, and complains if it be absent.

Fistula in ano.—This patient first observed pain and enlargement in the vicinity of rectum about eight months since, but not subjecting himself to a proper examination, was treated for hemorrhoids by his surgeon. This is a very natural mistake, for the latter disease is so exceedingly common, and produces such a variety of distressing symptoms in the region of the rectum, that unless the aperture is discovered by the patient the general symptoms alone would not lead the surgeon to the diagnosis of a fistula. On examination the patient presented an extensive swelling, with dark redness of skin, almost entirely encircling the rectum. Ten external apertures were counted, freely communicating with one another, which indicated a burrowing of the cellular tissues. An attempt to pass the probe into the rectum was unsuccessful. Dr. Moore remarked that this was by no means conclusive evidence that no such passage exists, for the aperture, which usually occurs immediately above the internal sphincter, may be so small as not to be found, in consequence of the great ulceration of the sub-cutaneous tissue, but the patient had never observed the passage of any gas or fœculent matter. It may, therefore, be a case of *incomplete external fistula*. It must, however, be recollected that fistulæ of this kind are extremely rare, as this disease almost uniformly commences by ulceration of mucous membrane immediately above the internal sphincter muscle. An abscess then forms, which may assume a great size by displacement and absorption of the fatty tissue around the rectum before it can penetrate the dense tissue extending from the verge of the anus to the tuberosity of the Ischium. Fistula in ano rarely recovers without an operation—the incomplete forms may get well without dividing the sphincter. The operation best adapted to this patient will be free incisions, following the line of the fistulæ, which may be converted into one or two, if not entirely cured. Division of the sphincter can be resorted to afterward, if found to be necessary.

Spina bifida.—This was a little patient two months old, with a tumor about two inches in diameter, resulting from a bifurcation of the Lumbar Vertebræ, and effusion. It presented the ordinary reddened and distended condition of the skin, and fluctuation was distinctly perceptible. No hope of benefit, it was remarked, could be expected from surgical procedure. A few cases operated upon have recovered, but too few to justify a favorable inference. One mode of operating consists in the use of a delicate trocar, through which the fluid is drawn off with very little injury ; pressure is then moderately applied for the purpose of preventing rëaccumulation, but great care is necessary in its regulation, for if applied too firmly the functions of the spinal cord and brain are interfered with—if not firmly enough effusion goes on rapidly. Puncture may be repeated frequently, and the skin has been known gradually to contract until the tumor had entirely diappeared and the patient had recovered. These cases, however, are to be looked upon as surgical phenomena, for either from the pressure or the puncture inflammation of the spinal arachnoid membrane may result. Dr. Trowbridge, of Watertown, N. Y., has operated by strangulating the tumor gradually, so as not to destroy the circulation, but gradually approximating the edges of the neck formed by this means, he finally attains adhesion of the internal surfaces, which are kept in apposition, while the tumor either atrophies or sloughs. He reports one case, thus treated, which has lived to adult age, a firm band stretching across as a substitute for bone, and the bones themselves growing gradually across. But unfortunately for the general success of the operation, the spinal cord is sometimes unraveled, as it were, and spread out on the surface of the sac, so that the patient who escapes the dangers of inflammation will die from such an extensive injury to the spinal cord. As a palliative measure it is recommended to apply moderate pressure on the tumor.

MISS TOD, M.D.: OR, A DISEASE OF THE HEART.

FROM THE PORTFOLIO OF A YOUNG LAWYER.

The days of my clerkship were ended; my examination was over; I was admitted; wrote myself "Nehemiah Hubbs, Attorney," put up my new bright little sign, and in my native village began my professional career. No, I did not either; I am mistaken; I *intended* to pursue the honorable practice of the noble profession to which I had dedicated my talents and learning in the place of my birth, but never was a truer word penned than the time honored proverb, "A prophet hath no honor in his own country." I believe if I had remained in the village of Green Briar till my head was white, they would have thought of me as nothing but a boy, and would have feared to trust me. Even after my sign was put up, nobody called me Mr. Hubbs; I was still "Ne," with old and young, and "Ne" I would have remained to this day, had I remained in Green Briar.

Only one case claimed my attention during the three months of my patient continuance in Green Briar, after being admitted to the bar, and that was the case of an unjustly impounded pig; "feloniously abstracted, your Honor, from the small but secure spot in which my client had trustingly deposited him, and maliciously driven to the public inclosure, called a pound, for the vile purpose, doubtless, of compelling my client in his poverty and destitution, to pay the enormous fee which has been demanded of him, in order to extricate the animal from his unpleasant position, and restore him to the bosom of his family!"

By this I mean the client's family, the pig having none of his own; it was a figure of speech undoubtedly, the family not inhabiting an Irish cabin, but still it rounded off the period, and sounded well to me, as I repeated over and over again my maiden speech, pacing up and down the floor of my little office. In this, my first case, I was successful so far as to rescue the impounded animal, and to save my client from the payment of an unjust demand; but it brought no silver into my pocket, neither, to my surprise, did it seem to bring honor to my name. The eloquence of my speech did not form the theme, as I had fondly hoped it would, of paragraphs in the village papers, or of discussion at the corners of the streets, neither did it bring to my office the rush of clients for which each day I vainly made ready. It was plain that I should never rise to distinction in Green Briar, and so I came to the sudden determination to remove from that pleasant spot, and settle in some great city where nobody knew or ever heard of me; where, above all, there was not a soul to call me "Ne."

There I was more successful, and soon had the opportunity of forming a very advantageous partnership; business increased; money began to come in slowly at first, but after a time more plentifully, and all things seemed prosperous in my outward circumstances. But alas! as we are often told poetically, there is no sweet without its bitter, no rose without its thorn; and trouble came to me in the shape of disease, insidious, and slowly in its approaches at first, long feared and suspected, but at length betraying itself so plainly, that I would blind myself no longer to the truth.

Yes! I was without doubt a victim to disease of the heart, not metaphorically, dear reader, for never had the organ beat with a quicker pulsation at the approach of mortal woman; so far as the gentler sex was concerned, I was perfect stoic; but that there was organic disease about my heart, I could not doubt, and if ever the symptoms disclosed themselves unmistakably, they did so in my case. There was fluttering, palpitation, irregular action, and at length, pain; I could not work; life had lost its zest; the fear of sudden death was ever with me. I could enjoy nothing. If I had anything to leave, or anybody to leave it to, I should have made my will, for I was quite sure now that I should either drop some day lifeless in the street, or that the morning would soon come when the power to rise from my bed would have left me.

I remained at my boarding-house, and found no comfort in anything but my cigar, and my dread disease grew worse and worse. As yet I had consulted no physician, partly, I think, from the apprehension of having my fears confirmed; but as I sat by my window one day, smoking as vigorously as ever, gazing abstractedly across the street, my attention was arrested by a modest little sign upon an opposite blind,—" C. L. Tod, M. D." While thinking whether or not it would be best to make a trial of a physician's skill, a sudden tinge and flutter decided me; yes, I would send for Dr. Tod, and know the worst at once!

Summoning the only male servant belonging to the establishment, I told him to step across and ask Dr. Tod to come and see me as soon as possible.

The boy grinned.

" What are you laughing at?" I asked; " is not Dr. Tod a good physician?"

" Oh, yes sir," he answered. " I believe she is a very good physician, but she ha'nt never tended nobody here!"

" *She!*" said I to myself; " the boy surely has Welsh blood in his veins; they always *she* everything."

The boy soon returned, saying, " the Doctor wasn't to home, sir, but I left your name on the slate."

In the course of the afternoon, as I lay upon the sofa, with my hand pressed upon my head, to still its irregular pulsations, there was a soft tap at my door. " Come in," I called out, and to my surprise, in came the neatest, brightest, most cheerful looking little woman it had been my lot to meet.

"You sent for me, I believe, sir!" she said in a quick, brisk, pleasant way.

"I! No madam; you are laboring under a mistake."

"Ah! I beg pardon," said the little woman, "I found on my slate the name of Mr. Hubbs, number fourteen, Mrs, Grey's boarding-house, with a request that I would call and see him."

"Your slate, madam!" I exclaimed, my astonishment increasing every moment, "you surely are not a—"

"Physician! yes sir;" she interrupted quickly, "I'm a physician,—Dr. Tod."

"Extraordinary!" was all I could say, for though I had heard at a distance of such beings, this was the first introduction to a female practitioner of the Esculapian art. It was rather awkward, but since she had come, I determined to make the best of it, and acquaint the lady doctor with may case.

She felt of my pulse, asked numerous questions as to my symptoms, and then in her quick, bright way, exclaimed:

"Nervous! nervous! that's all, depend upon it! excuse me; sir, but the air of your room—I presume you are much given to smoking.

I plead guilty.

"And how many cigars do you usually smoke in a day?"

"I could not tell, I never counted; as soon as I threw away one I took another, usually."

"Hum! cigar in your mouth pretty much all the time, eh! chew, too?"

Again a reluctant confession was wrung from me.

"I presume you sit up late, smoking all the time?"

"Yes, ma'am, smoking and reading."

"That's it! No disease of the heart at all, sir, nothing but tobacco; it'll make you fancy anything; it'll drive you crazy if you don't take care. Now, will you promise to follow my advice closely, or not? if not, I will take my leave immediately."

I promised, submissive as a lamb.

"In the first place, then, throw away all your cigars and tobacco, and promise to buy no more."

With a sigh given to my sole consolations, I said I would do as she directed.

Many more directions she gave me as to diet, exercise, early hours, &c.; perhaps she saw, too, that cheerful companionship was one thing I needed, and so she remained awhile talking with great glee, and spirit, about matters and things in general; and promising to call and see me the next morning, she left.

I have not felt so well in a great while, indeed I have not given my heart a thought since the little woman entered my room.

The next morning I found myself watching impatiently for the arrival of my little doctor. She came bright and cheerful as the day before; what a perfect little sunbeam she was! I could not help growing better under her care, and the influence of her cheering presence, and yet I managed to contrive some ache or pain every day, as an excuse for the continuance of her visits.

At length I found that my heart, which had long been quiet and apparently free from disease, began to flutter and palpitate again, but I observed it was only when I heard the little woman's tap at my door, or felt her soft fingers on my wrist. In short, as she had driven disease out of my heart, that little woman herself had walked into it. I could no longer blind myself of the fact; and when she one day told me that I was off the sick list, and out of her hands, I determined that she should not so easily get out of mine.

So I told her that as she had now given ease to my heart in one respect, she must not leave me till she had done so in another, or I should be worse off than I was before.

The little woman looked perplexed.

Then I stated my case, and explained my symptoms a second time, showing her the distressed state of my heart, and she alone could cure it. The former disease she had removed by an occasional visit, the latter could only be cured by her promising to come and take up her abode with me as *resident physician.* She understood me now, and by the way she pressed her hand on her own little fluttering heart, one would have thought that the disease was contagious; and I verily think it was. So now we determined to cure each other, and the next week we are both to apply to a clergyman, who is to form between us a life partnership, as lawyer and physician.

But one thing troubles me, of which I had not thought till now; that it is necessary to have our cards engraved. Married people are generally "Mr. and Mrs. So-and-so," or "Mr. Such-a-one and lady," but will any one please to be so kind as to tell me how I and my little wife are to be designated. Will it be "Mr. and Mrs. Hubbs?" or "Mr. and Mrs. Hubbs, M. D.? or as the ladies are going ahead so fast in these days of Woman's Rights, will one sink into still lesser insignificance, and shall we be "Dr. Tod and *gentleman!*" or must I drop the name of Hubbs altogether, and become a Tod, too! Some body please to tell me how to have those cards engraved! It is a point that ought to be settled. The ladies are rushing to the pulpit, and even to the bar; very many of them are already in the medical profession, and till a man has made up his mind what position he is to take when he has a minister, or a lawyer, or a doctor, for his wife, let him guard well his heart and above all if that organ or any other is diseased, let him beware how he employs a "lady for a leech."

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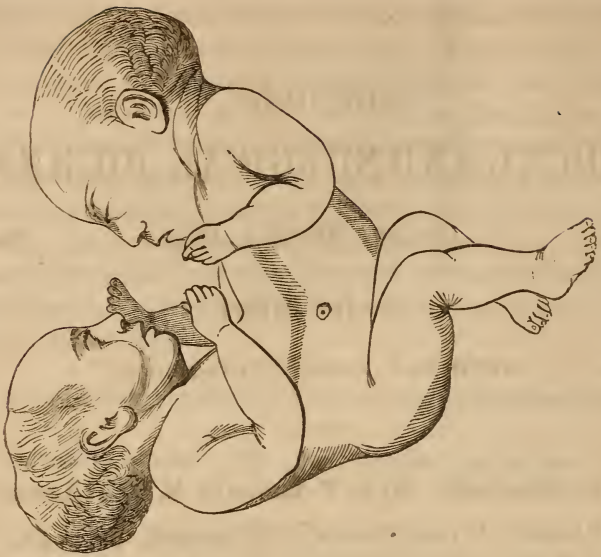
PART FIRST.

ORIGINAL COMMUNICATIONS.

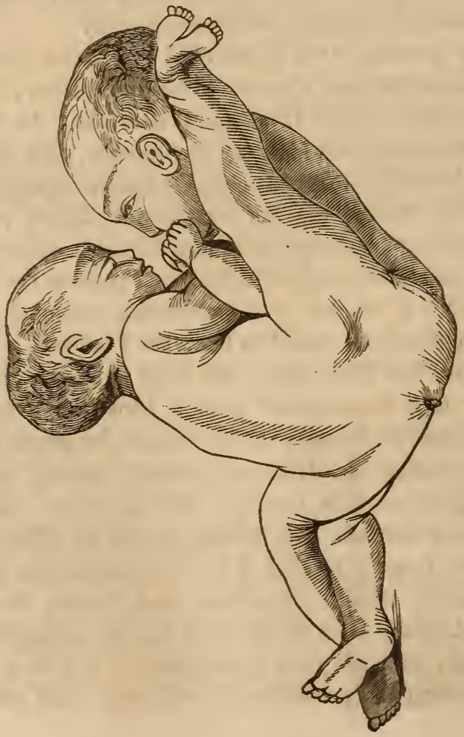
Art. 1.—*Monstrosity*. By G. P. Bœrstler, M. D., of Lancaster.

Dr. Dawson: In compliance with my promise, I now give you a history of the highly interesting and, as far as I have had the means of reference, altogether *unique* monstrosity.

On Tuesday evening, 16th January, I visited the wife of one of our most respected citizens, who was in her ninth labor; the uterine contractions strong, and at 15 minutes intervals. At 7 o'clock I touched, and found the Os high up the sacrum, and dilated to a dime's size—7½ o'clock—touched again, Os dilating rapidly—8 o'clock revealed it fully dilated, and the membranes slightly protruding; this examination gave the impression that a knee or elbow presented, and I at once placed the mother in the usual position for turning; I could not satisfy my mind as to the presenting part, and, therefore, ruptured the membranes, and then felt what I believed a groin, the hip resting in the left Illiac region, the body oblique across the maternal pelvis. Into this *supposed* groin I hooked two fingers, and with some little traction brought the breech into the proper axis of the pelvis, congratulating myself on an ordinary breech presentation which would give me little trouble. Waiting to see whether the fœtus would now advance, and finding this not so, after some very vigorous throes, I again introduced the left hand for the purpose of bringing down the inferior extremities; and, feeling the supposed groin, I slipped up the hand to the knee, and in attempting to flex this I was foiled; continuing the examination of this limb, I felt the spinal column along and parallel to it; reflection could bring to my



FRONT VIEW.



BACK VIEW.

mind no such presentation, and partly withdrawing the hand to search for the fœtal pelvis, I found the two lower extremities flexed on its abdomen, both of which I brought down, unfortunately separating the left femur from its epiphysis. Having now three legs to deal with, the idea of twins was naturally fixed in my mind. The uterine contractions being vigorous, and the tractile force applied greater than in ordinary breech cases, I believed the leg of the other child to be the impeding obstacle, and at once introduced the hand to correct the entangled posture of the *twins ;* carefully feeling this third leg, I found it firmly united to the body of the child whose two legs I had brought down, and arising from the dorsum of Illium. A malformation was now evident, its character unknown. Hooking two fingers above the attachment of this back leg, and grasping the two other thighs with the right hand, I acted with considerable force on these two points, and found the pelvis and body of the child gradually advancing through the inferior strait, until it reached the junction of two bodies united by the intergrowth of the ensiform cartilages ; at this point I met the greatest resistance during the labor ; this being hapily overcome I found two bodies diverging from each other, which, however, passed the strait without much trouble ; and by passing the hand up, I felt two apparently well formed heads, each as large as that of an ordinary child. To my mind it seemed impossible that those two heads could pass the strait at once, and I looked to the probable necessity of lessening one or both ; but, to my great gratificaction, they passed without any extraordinary efforts being called for. This could not have resulted but for the *good fortune* of the head of the smaller child resting upon the neck and cheek, up to the malar bone, of the larger.

Thus was completed a delivery of a most extraordinary "lusus naturæ" to the well-being of the mother and children.

The mother's recovery was rapid. The children are living—one vigorous, the other feeble—both take food and urinate and defecate. There was one ordinary placenta, and one cord.

Description of the Children.

The heads, faces, arms and hands, and the chest down to the ensiform cartilages, are well developed, and in proper proportions. From the junction downwards, one body, its anterior surface from side to side broader than in an ordinary child—the abdominal muscles well developed—the umbilicus in situ—two spinal columns perfect, the coccyx of each terminating on each side of the anus, and about half an inch from it—two pelves *united*, the left one belonging to the larger child, encroaching upon and lessening that of the right side. The sex female, one vulva and one anus, the opening of the latter not larger than an ordinary rye straw ; the two lower extremities are of proper size and proportions.

Upon the back, and from the dorsum of the two Illia, arises a leg, running up between the two spines and the two inner shoulders, and terminating in a right and left foot, joined at the heel. This is, in truth, a double leg, enveloped in one common integument, having two femurs, two tibias and two fibulas ; the leg admits of partially moving it directly backwards to a distance of several inches from the back of the child.

I have no doubt that nature designed one of these legs for each child ; for when the right child is awake it moves its lower extremity, as also the left foot of the double leg ; when asleep the limb is quiet—and so with the other child. Tickling the sole of either foot movement follows in the limb, but I have not perceived motion in the opposite leg to the one tickled.

The two bodies have each its heart and lungs—puerile respiration distinct—the action of each heart easily felt, though the first and second sounds cannot be distinguished, owing to the rapid systolic and diastolic movements.

So far as I have been able to detect, I believe the respiratory and cardiac action of both children to be synchronous, though the harmony of the former is interrupted by the crying of either child. I have frequently observed that when one of the children is nursing and the other crying, the latter falls to sleep ; so frequent is this occurrence that I hold it to be the rule, and it shows the strong sympathetic relation between these *two distinct human beings joined in one.*

What the unison of organs may be in the abdominal cavity we, of course, have no means of knowing ; all reasoning thereon must be hypothetical. That the viscera are duplicated, we think probable. In the feeble child there existed the anomaly of the frœnum linguæ, arising from the dorsum of the tongue about half an inch from the tip, and inserted into the palatine arch, of course rendering the tongue useless in sucking.

The following admeasurements were made in the presence, and by the aid of Drs. Effinger, Davis and Wagenhals. Owing to the want of calipers the circumference was taken. Occipito Frontal, 13¼ in. in the larger, 12½ in. in the smaller; Bi-parietal, 6 in., 5½ in.; this is half the circumference, having measured from one parietal protuberance to the opposite, across the vault. Mental 4¾ in., 3¾ in. Occip: Bregmatic, 13½ in., 13¼ in.; Shoulders, 10 in., 9 in.; Junction of Bodies, 16¼ in.; Pelvic, 13½ in.; length from head to foot, 17½ in., 17 in.; weight, 10 pounds.

These are the facts in this, to me, exceedingly interesting case, and I very much regret the absence of men fully capable to examine it in all the lights which our science demands from its votaries.

In the development of Embryos in Utero, certain starting points are always *essential* to the production of particular organs or limbs; this law is clearly manifested in the production of the double leg, for in the fusion of the two pelves the *acetabular portion* is presented, and hence the development of this extra limb.

A letter from Prof. Meigs refers me to the great work of M. Serris on Monstrosities—to it I have no access, but from the Professor's letter, I learn that a specimen approaching mine was born in Sardinia a few years ago, and brought to Paris for public exhibition; the union in this case was in the two pelves, and called by M. Serris a *pelvidym*. In mine the union is from the Zyphoid cartilages down, and, hence, I ask if it is not properly called an Hepato-pelvidym?

Death of the Children.

On Tuesday morning, 20th February, the mother observed the larger gasp a few times, and at 15 minutes before 8 o'clock breathing ceased; at 8½ o'clock I saw it, and could not detect any respiratory act nor pulsation of heart or arteries. Drs. Effinger and Wagenhals pointed out to me the apparent movements of the carotids. We, however, all became satisfied that *these movements depended upon the circulation of the smaller child.* The asphyxiated condition continued for *four and a half hours—no respiration, no pulse, the capiliaries of the skin filled with dark blood,* giving a purple hue to its entire body, and *beautifully showing* the *demarkation* between *the asphyxiated* and *living child*; this line from the junction down, extended half an inch to the right side of the Umbilicus. A violent effort in coughing by the smaller child communicated a shock to the larger, convulsive movements of its limbs followed, and it uttered a few feeble cries, when it again relapsed into its condition of suspended animation, and so remained till five o'clock in the evening, when the smaller child died—one gasp in the larger, and in 10 seconds it slept with its sister. Thus these children fortunately survived their unfortunate union only five weeks.

Accompanying this history you will have Daguerreotypes of the front and back views. These pictures are fac similes of the original, and executed by my fellow-townsman V. M. Griswold, in his style of accuracy and finish. You have seen the children, and I ask you to add to the above any remarks you may think proper.

It will not be deemed inappropriate, or improper, to append to the foregoing interesting account by Dr. Bœrstler of the unique malformation it was his fortune to meet with, condensed accounts of some other malformations which have occurred from time to time. Our readers, however, will remember that it is by no means intended in the few sentences we shall bring together, to furnish a complete essay on the subject, for neither the short time allowed to us, nor the sources of information within our reach, would enable us to do more than specify a very few of the more remarkable malformations which have occurred, and to add but a few observations which seem necessary in the premises.

The cases already observed have been sufficiently numerous to have been classified under several divisions. These have varied with the author that introduced them, each new observer adding a classification as a modification, and, in his estimation, an improvement upon those of his predecessors. Without entering into too much detail, suffice it to say that, they may all be reduced to three great varieties founded upon deviations from the normal standard in —(I) *Position;* (II) *Form;* and (III) in *Number* and *Size* of organs

I. Malformations *from the wrong position* of proper organs, constitute perhaps the most numerous class. The variations in the course of blood-vessels, familiar to every Anatomist, the special terror of the operative Surgeon, are the most common instances. In one case the right subclabian artery arising from the left side of the arch of the aorta, and passing between the œsophagus and trachea, gave rise to such difficulty in swallowing that the subject (a female) could hardly summon resolution enough to force down sufficient food to prevent starvation.—The same anomalies in the position of muscles are also not unfrequently observed. Even the viscera follow the same course occasionally. Dr. Baillie describes a case in the Philosophical Transactions, in which the organs within the chest and abdomen were transposed so that the heart was placed on the *right* side and the position of its cavities and vessels were reversed. The liver occupied the *left* hypochondriac region, and the spleen the *right.* The great end of the stomach was seen to the right of the abdomen, and the pyloric orifice a little on the left of the spine. The mesentery was inclined obliquely from right to left. The ileum terminated in the great intestine on the left side, and the cœcum was to the left of the psoas magnus and ilicacus internus muscles. The arch of the colon passed from the left to the right side of the body, and the sigmoid flexure crossed over the right psoas muscle to get into the pelvic cavity. The vessels and nerves in relation with these parts were normal in their size, but corresponded in their relations to the altered situations of the viscera. During life nothing unusual had been suspected.

A soldier aged 72, died, and was examined by Mery, when the same transpositions were observed in the chest and abdomen.

Mr. Abernethy describes a case of a child ten months old, where the viscera, but not the blood-vessels, were transposed.

Among the anatomical preparations belonging to Starling Medical College in this city, is a dried preparation of a man in which the heart is found on the right side, the liver on the left, and the internal viscera generally reversed.

II. Next to the malformations arising from changes of position of organs, those in the *form* are the more numerous. In these cases the number of organs, and even their position, may be normal, but their form is altered so as to constitute a deformity. They may resemble similar organs belonging to animals—may consist in an improper division of parts which should be united, or in the fusion of organs usually separate. Fœtuses, resembling the fabled Cyclopes, are occasionally met with where a coalescence seems to have taken place between the eyes. There are many varieties of this deformity which is comparatively frequent among animals, and especially among swine. They are usually born alive, but are not viable. So union of the lower extremities, with more or less atrophy, may take place, forming one apparent leg with two feet; or only one whole limb, or even only an imperfectly shaped caudiform mass. They are not viable.

There are other amalgamations frequently met with which do not influence the viability of the infant, such as coalescence of fingers or toes, which may be partial, having separate bones, but one envelope of soft parts, or having blended bones and soft parts.

Various of the viscera which occurs in pairs, may sometimes be blended as the kidneys and ovaries.

The most common instances of cleavage of organs are the different forms of hare-lip and cleft palate. Fissure of the tongue—of the vertebræ, constituting spina—bifida—of the thorax and abdomen—of the bladder, with or without inversion of the mucous membrane—of the urethra—of the diaphragm, giving rise to congenital diaphragmatic hernia — of the scrotum forming many instances of so-called hermaphroditism, have been recorded by many sound observers.

III. We come now to the last form of monstrosity arising from deviations in the *number* and *size* of organs in which there is either a deficiency or excess. Almost every one of the organs has been found wanting in individual cases. Acephalous fœtuses are by no means rare. It has fallen to the lot of many practitioners to bring them into the world. In these either the whole head or some of its components may be absent. Thus the bones of the cranium or face may be wanting, or some portion of the nervous centres, the brain and spinal marrow.

These cases, though usually still-born, are sometimes viable. They have lived, cried and suckled many hours. In one case of congenital absence of the bones of the cranium, but where an imperfect cerebrum seemed to exist, the child survived six days. In other respects it was perfectly formed. It took no food, and had no evacuation of any kind. Respiration went on naturally; it did not cry, but often made a hideous, whining noise. When the soft substance at the top of the head was touched, general and violent convulsions took place. No signs of voluntary motion were observed. The spinal marrow may be absent with or without the brain. In one case recorded, the spinous processes were all absent, exposing the spinal canal its whole length; there was no spinal cord, but its place was supplied by a vascular membrane. Most of these fœtuses, according to Sœmmering and Morgagni, are females. Portions of the face are absent, but more often in animals than in man.

The trunk may be deficient in several respects. The neck may be short from absence of the cervical vertebræ, giving an appearance to the head as of a cat's head, which name (katzen kopfe) has been applied to them in some parts of Germany. Internal organs are absent in some cases. Sir Benjamin Brodie met with a fœtus of nearly the natural form and size in which there was no heart. There was no communication between the trunks of the arteries and veins. The vena cava of the fœtus was continued so as to form the umbilical vein, and the internal iliac artery of one side was reflected to form the umbilical artery. There were various other defects, as in the fingers and toes. The liver was deficient, and the palate cleft. Several other cases are mentioned in the Memoirs of the Academy of Sciences in Paris for 1720 and 1740. Many other instances are recorded by modern observers, especially one by Dr. Clarke, in which the brain and heart were both absent.

The extremities may be absent, one or all, or atrophied. Fingers and toes are often absent, and even limbs. Individuals born without certain limbs, have survived to a good age, and astonished the world by their exhibitions of the manner in which they perform with their organs processes usually belonging to those absent. A child who had no ear or any perforation for one, and yet heard, is mentioned. Animals are born without certain limbs, of which Haller gives many instances, among others a cat without fore legs; and at this time, at any rate during the past summer, one of the attractions at the museum and gardens on the Canada side of Niagara Falls, consisted in a dog born without fore legs, which seemed at that time lively and healthy in all other respects.

The reproductive organs may be severally absent, especially one testis or an ovary; nor does this appear to affect the propagation of the species. The uterus has been known to be rudimentary—even absent. The penis still more often.

In this class also may be included those cases of deficient opening, as atresia ani—vaginæ—oris—where cloacal terminations therefore exist.

Mal-formations, with one or more supernumerary organs, are comparatively frequent. Geoffrey St. Hilliaire gives an instance of seven fingers on one hand, and eight toes on one foot. Similar cases are recorded by other authors. Those born with six fingers are by no means rare, and once formed, the peculiarity is liable to be perpetuated to succeeding generations.

Much more rare than these are those congenital mal-formations where a number of organs are added, so that an approach to duplication is discovered with more or less ease. The duplication may be so nearly complete that the monster appears as the union of two children, as in the case described by Dr. Bœrstler, or one of them being so atrophied appears as the parasite of the more perfectly developed child, to which it is united. These are termed monsters by implantation, and the former "double monsters," or by coalition.

All varieties of supernumerary parts have been observed from the addition of a single muscle or vessel, internal or external organ, and limb, to a complete human being, from those having a single finger added, to the coalition of two perfect bodies, as in the Siamese Twins. An additional head has been observed often in animals. An ox is mentioned in the Philosophical Transactions with an extra head attached under the lower jaw, and a cow attained its full growth with two heads and necks. Such anomalies form the staple wonders of many traveling showmen. Rarely this deformity has been observed in man. Sir Everard Home's case is interesting in this relation. It was an Indian child with a double head, which lived to the age of two years, and died then, from the bite of a *Cobra di Capello*. The midwife, horrified at the strange sight of a double head, endeavored to destroy the infant directly after birth by throwing it on the fire, where it remained long enough to burn one of the eyes and ears to some extent. The body was naturally formed, but the head double. Beside the proper head another of the same size, apparently perfect in shape, was attached at the upper part. They were attached at the crowns, the upper head being inverted. They were firmly united, without any indentation. The face of the upper head was not over that of the lower, but had an oblique position, the centre being directly over the right eye. The neck of the upper head was two inches long, and its extremity terminated in a soft tumor like a small peach. The eyes of both heads moved at the same time, but those of the upper head in different directions. The sides of the upper contracted on exposure to light, its eye-lids were never completely closed, but remained a little open, even when the child was asleep. Tears flowed almost constantly from them, but never from the eyes of the lower head, except in crying. The superior head seemed to sympathize with the child in most of its natural actions. When it nursed the upper head seemed to express satisfaction by an increased flow of saliva from the mouth, though it always flowed a little from it. Both faces smiled. When the skin of the superior head was pinched it did not feel as much as if the lower were touched. No pulsation could be detected in the situation of the temporal arteries of the upper head at the age of the age of six months, but the superficial veins were very evident. The head is now in the Hunterian Museum in London. The two skulls are nearly of the same size, and equally ossified. The frontal and parietal bones, instead of being continued over the top of the head, meet each other, and are united by a circular suture. The two skulls are almost equally perfect at their union, but the superior skull, as it recedes from the other, becomes imperfect, and many of its parts are deficient. They both have the same number of teeth. No septem of bone divides the two crania so that the two brains must have been contained in one long case.

An Italian was seen in 1698 with another head than his own proper one, connected to the chest below the cartilage of the third rib. It adhered by the lower half of the right side of the face and head, so that the right ear and surrounding parts were not seen. All the rest was plainly discernible. The man felt whatever touched the additional head.

Other parts of the body may also be additional. The vertebræ may be increased in number, and give rise to a caudal extremity. Men with imperfect tails have been observed by competent authorities. Indeed, if we may credit certain travelers' stories of late years, this, which has been considered a very rare anomaly, must be raised above the class of deformities, and described as one of the characteristics of a race. Of which, doubtless, more proof than has yet been given will be required by this sceptical age!

An additional abdomen and lower extremities were observed by Winslow to be attached to the left side of the epigastric region of a girl 12 years old. The second body was small. It had a row of vertebræ connected to the sternum of the other. Both bodies discharged fœces. There were no muscles in the additional body, the interval between the bones and skin being filled with fat, blood vessels and nerves. Whatever touched the additional body was felt by the child. There were no sexual organs.

Bartholei and Zacchias relate that they saw with astonishment the double monster, who was exhibited in many of the principal cities of Europe, named Lazarus Colleredo. He was 28 years old, well formed and of the usual stature. To his chest was attached another deformed being, hanging from the lower end of the sternum. It had two arms with three fingers on each hand, and one imperfect lower extremity. The head was larger than that of Lazarus himself, but not well formed. It was covered with hair but no beard.

The trunk seems to have been imperfect. The eyes were generally closed, the mouth open, with saliva constantly flowing from it. There was a pulsation in the chest. Respiration was hardly perceptible. The hands, ears and lips could be moved. It was nourished by food taken in by Lazarus. The pious parents had caused the addition to be christened separately from Lazarus, under the name of Johannes Babtista. On this point Zacchias raises an argument, as to whether John Babtista had a rational, distinct soul. As he inclines to the negative, he doubts the propriety of its baptism, but reverently bows to the decision of the church, in which he does not acquiesce. On the origin of these addenda he determines that they are "*additamenta ex luxuriante semine enata, et quod nullam ne per somnium quidem rationalis animæ potentiam sortirentur.*"

In Ambrose Pare's works mention is also made of a man, forty years old, who had an additional body, perfect in its parts except the head. A similar deformity suspended to the navel of a boy, six years old, is recorded by Amatus Lusitanus. A Gentoo boy is mentioned in the Philosophical Transactions, who had a little brother suspended to the Pubes, and consisting of pelvis and lower limbs. He felt whatever was done to this, but could not move the legs, which were cold.

Beside these, monsters formed by the addition of other supernumerary organs, there are some, where (with additional organs, more or less perfect) the points of union are unlike the organs of a natural body, but exhibit a coalescence of the same parts of the two bodies, in various degrees and shapes. In animals this is more often the case than in man, and a friend of the writer has a specimen of a young pig with two distinct bodies and a head formed apparently by the blending of two normal heads. In the work of Soemmering plates represent a series of such cases, from a head naturally formed to two natural heads joined, in which the intermediate grades are filled by individuals differing almost imperceptibly from each other. The coalition may take place at almost any point. In Rita Christina, born on the 12th of March, 1829, at Possari, in Sardinia, the head, neck, and upper extremities were doubled, while the chest, abdomen and lower extremities were more or less fused together. It lived about eight months, and died in Paris, whither it was taken for experimental purposes. An interesting case of this kind we shall notice after we have glanced at other varieties of mal-formations.

The thorax may be double and the union take place in the abdomen, as in a case of Forieps, born at Stamsried, in Bavaria, Jan. 1, 1838. Two children joined by the abdomen, double above and having one penis and two lower limbs, but no rectum, lived seven days and died within a quarter of an hour of each other. Another of the same character is said to have lived in Scotland during James IV.'s reign, for 28 years. One body died some days before the other. To the same category belong the celebrated Hungarian Sisters. The duplicature of organs was, however, more complete. They were born at Szony, in Hungary, in 1701, and died in 1723, when they were buried in St. Petersburgh. They were joined at the back, below the loins, and had their faces and bodies placed half sideways toward each other. They had one anus and one vulva. The viscera were all double, except that the two vaginæ united into one toward the external aperture, and the two recta terminated in the same way. There were two bladders and urethræ opening separately. The two sacra were blended into one and had a single os coccygis connected to the lower end. The two aortæ were joined into one tube before the division of the iliacs, and the inferior vena cava were united in the same place. They were not equally strong nor well made. They had separate wills, and the strongest dragged the other after her when she wanted to go any where. At six years old one had a paralytic affection, which left her much weaker than the other. They had different temperaments. Neither the alvine nor the renal evacuations were performed at the same time by both sisters. The menses happened at different periods, more than a week intervening. Sometimes one, sometimes the other, would be disordered at such periods. One slept oftentimes while the other was awake; one had a desire for food while the other did not They suffered from small pox and measles at the same time, but other diseases attacked them separately. Judith was often convulsed, while Helen was well. One of them had a catarrh and colic without affecting the other. Their intellectual capacities differed. They were, however, both lively, merry and well bred, and could converse in several languages, as Hungarian, German, French and English. They died together.

To these instances of coalescence of organs and bodies we may add those where a body has contained another body, or individual parts, of which several examples might be quoted. We have only space for one instance of a *fœtus in fœtu*—which is described by Mr. Young, in the first volume of the Medico-Chirurgical Transactions.

From the time of birth a tumor was perceived in the abdomen of the child, which increased until the time of death, which occured at nine months. A firm and thick black cyst was placed in front of the abdominal aorta between the origin of the celiac and mesenteric arteries, attached to the left crus of the diaphragm, and covered in front by the stomach and duodenum, pancreas and its duct, and transverse portion of the colon. It contained 78 oz. of limpid fluid and a rudely formed human fœtus, adhering to its surface by a fleshy cone, proceeding from the umbilicus, and measuring one inch and seven-tenths at one end, and one inch at the other. This production was covered by integuments of the natural appearance, in which there was sebaceous matter. The extremities were distinctly recognizable, and in many respects well formed. There were distinct fingers, toes and nails, but very short and stout. There was something corresponding to the basis of the cranium—a large portion of the spine, some short ribs, sacrum and ossa innominata, and some bones and joints of the limbs, well formed. Very little muscular substance was found in this creature, none on the trunk, a little about the hips and none in the remainder of the limbs, which consisted of adipose substance. There was neither hair nor spinal marrow, but a distinct plexus of nerves just within the umbilicus, about the commencement of the intestines, to which numerous branches were distributed. There were two locks of hair just below the parts corresponding to the head. There was neither heart nor lungs, no abdominal viscera except a few inches of naturally formed intestine with mesentery. Two kinds of vessels were distinguished, but their connection with the cyst was not made out. A scrotum and hairs were distinctly cognizable.

Not only may parts of two separate bodies be thus in various ways united, but monstrosities have been recorded in several instances in animals, and a few in man, where parts of three bodies entered into their formation. Thus, according to Geoffrey St. Hilliare, Drs. Reina and Galvagni observed in Catania in the year 1832, a child with three heads.

We translate the following case from Walter's Anatomical Observations,* which was examined and dissections of it made by Dr. Johann Gottlieb Walter, and do so the more fully as it more nearly resembles Dr. Bœrstler's unique case than any we have discovered in our limited researches.

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* Walter's Anatomische Beobachtungen, &c. Berlin. 1782.

Anna Maria Woblack, aged 35, residing near Berliu, was confined on the 17th November, 1773, of twins, consisting of a fine boy, who did well, and the following monster who died during labor.

External Appearance.

The monster appeared composed of two children, whose faces looked toward one another. They were joined at the breast by union of the zyphoid cartilages—the space, therefore, between the fœtuses above formed a triangle, with the apex below and the base by a line drawn between the heads. The heads are about the same size. One neck however, is shorter and more contracted than the other. The two arms of the same side are also smaller than of the other side. Otherwise they are equally well formed as those of ordinary children. The umbilical cord was attached to the middle region of the abdomen common to both children. The umbilical artery was larger than ordinary—the veins as usual. There were two proper lower extremities and a mal-formed middle leg with seven toes. Each child had its own sacrum on which the vertebral column rested, and from which a normal os innominatum proceeded on one side, the pubis of one child forming a symphisis with that of the other. On the other side, between the two sacra, was situated an abnormal ilium, or rather a bone, as of two ilia united, from the lower part of which hung the third lower extremity, attached by ligaments so that each child had a normal leg and proper pelvic bone, and a third ilium and deformed middle leg were common to both. This leg, on dissection, contained a femur, a tibia, thick and contracted, bent to a considerable angle about its middle—the usual bones of the foot, and seven bones of the metacarpus, six of which formed a row, and the seventh, which was the largest, supported two toes, united as by a firm web. The sex was male—there was a penis and scrotum, but no testes therein.

Internal Appearance.

There were found two pair of lungs, two sets of ribs and vertebræ, two sterna united at the cartilages, two hearts, the left being the smaller, abnormal in the position and the distribution of its great vessels. Those of the right side were normal. There were two livers blended somewhat anteriorly, two spleens, two stomachs, two duodena, two jejuna, and two ilea, which united at the latter end to form one canal, one colon, cœcum, and rectum, two kidneys in the left side, and one, very large, on the right. From these, ureters proceeded to the bladder common to both. The distribution of blood vessels was exceedingly anomalous in the cavity of the abdomen. The testicles had not descended into the scrotum.

Can these multiform departures from the normal body be attributed to any law governing their production, or to any accidental external influence. The ancients laid great stress on the power of the imagination of the pregnant woman, to which was attributed the production of all nœvi and other deformities. Of later days the fashion has been to decry all such hypotheses, yet to substitute no reliable explanation. That a severe nervous shock in the mother may exercise some power in the arrest of development of the fœtus is by no means improbable in some few instances, but there are cases where an over-development (so to speak), rather than an arrest of the process, seems to have taken place. Moreover, the cases of transposition of various organs remain to be accounted for. The contingencies which must all occur during pregnancy, in order to a proper healthful gestation, are as little known as the laws of development of fœtal life, and the absence of any of the former, which may vitiate the proper action of the latter, are subjects in the investigation of which but little progress has been made. By a careful collection of these anomalies, and other kindred subjects, it may be that some insight can be eventually gained, into the mysterious laws to which the growth of the embryo is subject, and the accidents by which their operation is suspended or thwarted. At present it is far easier to negative the various theories put forth from time to time on the subject, than to suggest any proposition suitable to explain the existence of all—of even a majority—of the ascertained malformations.

R. G.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art 1.—*The Probabilities of Contagion in Fever.* By Dr. Stokes.

"What I wish you to believe, gentlemen, is, as I have already stated, that our Fever is both epidemic, as proceeding from general but unknown causes, and also contagious; and no one can deny that causes which would act in depressing the health and moral energies of a people, by rendering them less able to resist the effects of disease, would increase the general mortality. The influence of bad ventilation and overcrowding I need not here dwell on; nor, on the other hand, need I occupy your time with more arguments to establish the truth of the doctrine of contagion. You will find in the writings of Dr. Christison, and Dr. Graves, convincing evidence on these points; and let me again refer to the great argument drawn from the liability to contract fever which has so long been observed among the medical practitioners of Ireland.

"Before I leave this subject, I wish to recall to your memories the calculation made by Bishop Brinkley, the results of which were so strongly in favor of the communicability of typhus. They went to show, that an overwhelming number of chances would exist against the occurrence of a certain event, such as the sickening of eleven out of twelve of a family, in a particular district, if the sickening of one did not promote that of another, or, in other words, if the disease were not contagious. On this subject, I have had the honor of receiving a letter from Dr. Paget, of Cambridge; and I would not be doing justice to you, or the question generally, if I did not state the objection made by this eminent physician, as to the soundness of the conclusions in favor of contagion, which appear deducible from these calculations. Dr. Paget observes, that the form in which the problems are stated, excludes the consideration of all local influences, except contagion; in this he is perfectly correct, for the elements of local influences were not presented in the questions given to Dr. Brinkley for solution; and for this reason, that the framer of the questions was not a believer in the effect of these local influences in causing fever. Yet we must agree with Dr. Paget, that had this element of local influences, besides contagion, been included, it must necessarily have diminished, by whatever was its real value, the overwhelming result which the calculations, as they now stand, give in favor of contagion. But, even if we give a value to this cause which would diminish the numbers—say, even by 100,000,000—it still would leave the chances against the event, on the non-contagion theory, not less than 89,000,000 to 1,—a result more than amply sufficient to confirm the doctrine of the communicability of the disease. But even Dr. Paget himself admits, that, taking the case of the second calculation, if the consequence of these deductions on the score of local causes, were to reduce the probability of 300,000 to 1 to that of 1000 to 1, yet this latter probability would be sufficient to carry conviction to the mind of any candid person. He, however, observes, that we have unhappily no means of estimating numerically the requisite deductions, no means of calculating the effect of noxious exhalations from decomposing organic substances, of bad food, and other assignable causes, which have been supposed capable of promoting the spread of fevers; and he properly remarks, that Dr. Brinkley's results include, with contagion, the possible effects, not only of known, but also of all unknown causes, which may make an individual household more liable to fever than their neighbors. I entirely agree with Dr. Paget, that, as an argument for contagion, the results of Dr. Brinkley's calculations must be taken minus the effect of local influences; and I feel indebted to him for having drawn my attention to this point, and to the importance of noticing it, when the numerical value of these results is considered. My opinion, however, as I have already stated to you, is that, in Ireland, local influences have not that great importance either as generators or promoters of fever which some believe them to have, and, consequently, the deductions to be made in favor of these causes would not greatly weaken the general results. We must believe, that the causes of fever, independent of mere contagion, are various in the extreme, that they are probably numerous and complicated, acting in combination rather than singly, and varying in their effects, not only in consequence of their own properties and combinations, but also as regards the condition of the individual in whom fever is developed. To this point I have already alluded in a former lecture, in speaking of the influence of the same contagion on individuals of different countries. And Dr. Paget, in observing that our pathology of fever is not so perfect as to assure us there are no predisposing causes besides those which are commonly allowed, notices the comparative immunity of infants and persons above forty years of age from the typhoid fever with rose spots, and affections of Peyer's glands, and as indicating that the constitution of the individual is an element in the question."—(*Clinical Lectures on Fever, No.* 6.)

Epidemic changes in the local affections of Fever.

"In their seat, if not in their nature, these affections are observed to vary in different countries. On the Continent—at least in France, and in a large portion of Germany—the frequency, and, probably, the preponderance of the secondary disease of the intestines, is a matter that must be admitted. So remarkable, indeed, is the predominance of the tumefaction and ulceration of the mucous glands of the intestine in France, that Andral, in the first edition of the *Clinique Médicale,* described fevers under the general head of diseases of the digestive system; and yet Andral was no blind follower of Broussais. In Ireland, however, we do not find this remarkable preponderance of the secondary diseases of the digestive system; but when I state this to you, I wish you to understand and adopt this principle, that all statements as to the anatomical characters of fever, as it prevails here or elsewhere, are to be accepted only so far as they apply to the prevailing epidemic. And, although it is true, that on comparing our typhus with the French typhoid fever, this difference becomes apparent, that the existence of follicular disease of the intestine is almost the rule, and its absence the exception in the latter affection, while, in the Irish typhus, this condition of the intestine is rare; you must, however, bear in mind that, in Ireland, and in our own time, we have had a great epidemic of what was certainly typhus fever, in which the condition of the intestine accurately represented that which is found to prevail on the Continent.

Indications for treatment in Fever afforded by the state of the Heart.

In one of the Clinical Lectures on Fever, delivered by Dr. Stokes, in the Meath Hospital, Dublin, and reported by Dr. Lyons, are these very important and practical remarks:

"I have sometimes observed that students were under a misapprehension about the doctrines which we have long held in this hospital with respect to the condition of the heart as a guide for the use of wine. They have come to the erroneous opinion that we are only to give wine where we find the want of the first sound of the heart, and that we are not to give wine where the heart is acting well. This is a mistaken view of the matter. What we have established as to the state of the heart in connection with the effect of stimulants, is simply this,—we have ascertained that the efficacy of stimulants is often directly as the debility of the heart. It has been also ascertained that the power of bearing stimulants, their effect upon the nervous system, their good effects on the general condition, are directly as the weakness of the heart. We may lay down as a rule, that there are three conditions of the heart to be looked at by the practical man in the treatment of fever. In one, we have an excited heart—a violently excited heart all through the case; and this heart may be excited and violent, although the symptoms be those of extreme adynamia, although the surface be cold, the breath cold, and the pulse so feeble that it cannot be discovered. Nay, the heart may act with great force for several days, and yet there be no pulse at the wrist. This is one case. In the next case, we find exactly an opposite condition, in which the systolic force of the heart is diminished. This is shown by loss of impulse of the heart, by diminution of the first sound, and, in certain cases, by extinction of the first sound of the heart while the second remains. This is a case which calls for wine, and in which you should give it: it is a case in which, in the vast majority of instances, wine will agree with the patient. There is a third set of cases in which the heart does not seem to be implicated at all in the course of the disease, in which, notwithstanding the existence of the most extraordinary group of symptoms affecting various organs, the heart, in the middle of the storm, seems to be in a state of calm and gentle quiet. If we compare these three sets of cases with a view to prognosis, we may arrange them in this way. The case of excited heart all through, with feeble pulse and with adynamia, is unquestionably the worst case. There is no worse symptom in fever than an excited heart. It is especially a bad symptom when, with that excitement, we find a feeble pulse. The next will be the case of sinking of the heart; and the most favorable case is that in which, as I said before, the heart seems to escape disease. But you are not to suppose, that because you have an excited heart, you are not to give wine if the symptoms of the patient require it; and you are not to suppose that, because the heart is not affected at all, you are to withhold wine if the general symptoms of the patient require it. You are not to found your exhibition of wine or stimulants upon any one thing ; you are to take the general state of the patient into consideration. What we have done is to discover an intelligible practical rule which will guide you in the use of wine in certain, I think in many cases ; but you are not to suppose that because this man has a clear first sound at his heart, therefore you are not to give wine. You are not to suppose that because the heart is safe you can do without wine."

The great importance of Nourishment in Fever.

I wish also strongly to impress on you the great importance of the use of other forms of nourishment in this disease ; for we must not only keep up the nervous energy of the system by wine, but we must support nature by food. There is no mistake more fatal in fever than the withholding of food. I was early taught the importance of the use of careful nourishment in fever by my friend and colleague, Dr. Graves. I remember once, Dr. Graves, when speaking of the necessity of the use of nourishment in fever, made use of these words : " If you are at a loss for an epitaph to be placed on my tomb, here is one for you,—*He fed fevers.*" In addition to the prejudices with which the inflammatory doctrine imbued so many minds, with respect to the use of food in fever, there was a new set of arguments raised against it, in consequence of the experiments of an American physician. I allude to the case observed by Dr. Beaumont, and so often quoted since. In this remarkable case, various medical substances and articles of food were introduced through an external fistula into the stomach, their effects being noted, as also the conditions of temperature, vascularity, &c. A set of results were subsequently published in connection with the action of the stomach upon food. One of the results stated to have been thus obtained was, that the existence of the state of fever altogether suspended the process of digestion. Here was a statement which had the appearance of being the result of strict observation. It influenced a number cf young men ; but did it influence those who had once been in charge of a fever hospital ? Not at all ; because those men knew very well that, no matter what Beaumont might say about the stomach not digesting when the patient had fever, in thousands of cases patients in fever digested remarkably well, required food, and derived benefit from it. In a large number of cases of typhus fever, the stomach has an excellent power of digestion ; and, I believe, if we were bold enough, we would find that many articles of food usually forbidden to fever patients might be given to them with safety. A curious incident was related to me which shows that the stomach in fever is capable of digesting even a rather coarse article of food. A lady who had been recently married was attacked with extremely severe petechial fever; she was covered with dark-colored maculæ, and the disease had run to about the twelfth or thirteenth day. She was attended by several eminent physicians. Her case was an extremely bad one, and her life was all but despaired of. She was violently delirious. Her husband had occasion to leave the house on some business. At the period of the dinner-hour of the family, the servants were cooking a rump of beef and cabbage, and the odor of it filled the house. In her delirium she called for the beef and cabbage; she was then, you must understand, in severe fever, and covered with maculæ. Her sister, who was attending her, believing she was dying, thought it only right to indulge her, from the feeling that it was right to indulge the request of a dying person. She proceeded to the kitchen, and, as soon as the beef was boiled, cut a very large mess of beef and cabbage; and this was brought up smoking hot to the lady's bedside, when she devoured it with great avidity. Shortly afterward her husband came in, and was told what had happened. He became terrified, and sent for physicians in every direction. Four or five assembled; time was pressing, and every one agreed that something should be done. At length the late Dr. Harvey, a practical physician of the very first class, arrived. He was laid hold of by the agonized husband, forced up stairs, and his opinion earnestly requested. At that time the stomach-pump was not in fashion, but every one agreed that something decisive should be done, that an emetic should be given, or some extraordinary effort made to get this mess of beef and cabbage out of the lady's stomach. When Dr. Harvey went to the bedside, he found the patient in a tranquil sleep. He turned round, and when anxiously appealed to what should be done, he said: "You had better wait till she wakens; let her sleep it out." She slept for four or five hours; awoke wonderfully better, and on the following day was out of danger. I do not give you this case to induce you to feed your patients with salt beef and cabbage in fever, but it is very important, as showing that in typhus fever, with maculæ, the stomach is capable not only of digesting such a coarse article of food as salt beef, but that even such food may have a good effect. —(*Clinical Lectures on Fever, No.* 5.)

The non-inflammatory nature of the ordinary Bronchial Complication Typhus.

"You will commonly hear it said, that this or that patient in typhus has got bronchitis; and if we were to be guided by physical signs alone, such a statement would seem to be correct. But I wish you to believe that the essence of this affection is not bronchitis, but rather a special condition of the air-passages, secondary to the typhus fever, the result either of the typhus deposit or of the vascularity with turgescence, of which I spoke in a former lecture. If bronchitis—that is to say, if inflammatory action supervene—it must be considered either as reactive or specific. I am anxious to impress this upon you, because there are still many practitioners who hold that the physical signs of bronchitis are sufficient to establish the existence of inflammation. Now, I do not know any characteristic difference between the physical signs which may occur in ordinary idiopathic bronchitis, and those which present themselves in typhus when the air-tubes are engaged. In both you have sonorous, sibilant, mucous, and crepitating râles; and yet the two diseases are pathologically distinct. Observe, that whatever will diminish the calibre of the tubes, whether it be deposit, typhoid, congestion, or true inflammation, will give râle; whatever causes secretion, whether it be true inflammation, or something the very opposite of inflammation, will give you râle. We have, as I said before, in typhus, the physical signs which are observed in true bronchitis; but beware how, in any given case of fever, you conclude from their presence that the patient has true bronchitis. In certain cases there may be reactive irritation; but never forget that the typhoid disease alone, without any inflammation whatever, is competent to produce all the signs of bronchitis. Why do I urge this so much on you? Because I wish to avail myself of every opportunity of removing from your minds the erroneous doctrines of inflammation which have been so long in vogue. We are greatly influenced by names; and though I do not suppose that there are many who would treat a case of the bronchial affection in typhus with the same reducing measures which they would employ in the idiopathic disease, yet I am sure that the idea of these signs proceeding from inflammation, makes many of us who have not yet unlearned our early teachings, timid in the use of stimulants.

"We find that this bronchial disease runs a course exactly analogous to that of the other secondary affections of typhus. It comes on insidiously, or, as I said before, silently; it gradually advances to its maximum, and sometimes increases to that degree that the patient dies by asphyxia. This is often the case when the disease has not been recognized at an early period. It is in almost all cases preceded by the symptoms of typhus for several days. I think in the best-marked cases it first shows itself about the fourth or fifth day of the disease; but it may supervene at any period of the case. It subsides spontaneously. You will have abundant opportunities of observing the following curious circumstance in the subsidence of this disease, either when the affection runs its natural course, or when it has been necessary to treat it specially. In the true idiopathic bronchitis, when the patient is placed under treatment, we observe the disappearance of the râles to be gradual; they are less intense and less complicated day by day: and this goes on probably for a week or ten days, or it may be a fortnight, before the last shade of râle disappears. In the typhus affection, on the contrary, you will often observe that the most extensive, intense, and complicated râles disappear as if by enchantment, leaving the respiratory murmur perfectly pure. This sudden disappearance of the physical signs is only an argument among many to show their non-inflammatory origin. Nothing can be more remarkable than this; it seems analogous to the sudden disappearance of the eruption of scarlatina from the skin. You may often see this eruption lasting for three or four days, and then suddenly disappearing, leaving the skin white and pure. Consider the case of the lung in the same way, and in place of the scarlatina eruption, take the secondary bronchial disease or eruption, if you will, and you can understand the occurrence of a similar change. Mind, I do not say this happens in all cases; and I suppose that for its occurrence, it is necessary that there shall have been little, if any, reactive irritation. And, as I said before, we see it in cases not only where the disease has been little, if it all, interfered with by treatment, but in others in which we have used such remedies as dry cupping, counter-irritation, and various stimulant medicines. Here the practitioner is often surprised at the rapid and complete success of his treatment, and may take credit to himself for bringing about a change which was, to a great degree, at all events, induced by the operation of the law of periodicity.

"In the next place, we find that the best treatment in such cases is the stimulant. The mere circumstance of a patient having or presenting the most intense signs of bronchitis in typhus fever does not by any means warrant us in bleeding him, in reducing him, in exhibiting tartar emetic, or in withholding wine. Nothing of the kind; the best treatment for such cases is the free use of wine, of ammonia, turpentine, bark, and such measures.

"Another argument is drawn from this interesting fact, that in a large number of cases of softened heart in typhus, we find a combination with the bronchial disease, and it is quite fair to conclude, that the conditions of the lung and heart in these cases are similar. The practical conclusion, then, to be drawn is, that the physical signs of bronchitis in a case of maculated typhus fever should not make you conclude that the patient had bronchial inflammation; and therefore you should not treat the case as such.

"There is a remarkable case of fever which is not at all uncommon in this country, in which we have an alternating disease, as it were, between the abdominal and the pulmonary organs in typhus fever. This is a very bad form of fever—one of the worst. We find that to-day, we shall say, the chest is greatly loaded, that you get no good respiratory murmur; there are most intense râles, and all the symptoms of extensive disease of the lung. At this time, the belly is soft; it is not tender on pressure: and there is no diarrhœa. Things go on for two or three days, when we find the belly to be swollen, tympanitic, tender on pressure; there is diarrhœa; and on applying the stethoscope to the chest we find it comparatively free, and the râles either gone or almost altogether gone."—(*Clinical Lectures on Fever, No.* 8.)

The Relative Frequency of Chest and Head Symptoms in Fever.

"With respect to the question of the comparative frequency and importance of the pulmonary as contrasted with the nervous symptoms in fever, as it affects the lower and upper classes in this country, my decided impression is, that taking the experience of the last twenty-five years, the secondary bronchial, or, to speak more generally, the pulmonary complications are much more frequent and dangerous in hospital than in private practice. It is not easy to explain why this should be so, but certainly we find a greater preponderance of nervous symptoms in the typhus fever, as it affects the upper classes of society, than in cases of the disease as we meet with it in hospital; while in hospital practice the nervous symptoms, though we cannot say that they are absent, seldom require any very special interference on the part of the practitioner. No doubt we meet with coma and subsultus tendinum occasionally, but that predominance of nervous symptoms in the early periods of typhus, which is so common in the upper classes of society, is but rarely seen in our wards; and if you will only reflect on the simple fact, that we so rarely have occasion to shave the head among our hospital patients, you will fully see the truth of what we say. Remember, too, how many cases we have had in which, while all the symptoms of typhus—such as prostration, weakness of the heart, eruptions of maculæ and petechiæ, and well-marked secondary diseases of the mucous membrane of the intestines—were present, while the patients' mind remained quite unclouded, and while no symptoms occurred calling for any special measures directed to the head. The typhus of Ireland, then, is not characterized, as Dr. Lombard has described it, by a preponderance of cephalic symptoms, at least when it occurs in that class from which he supposes the best specimens of the disease to be drawn. He is incorrect in his statements about the predominance of cephalic symptoms as when he says that the absence of follicular ulcerations of the intestines is a distinctive mark of Irish typhus.

"In the typhus fever of the upper classes in this country the nervous symptoms are generally much more aggravated and developed at an earlier period; and it may be that this preponderance of the nervous symptoms, this tendency to affections of the brain in one class, even though these affections be principally neurotic, is a cause of the comparative exemption of such cases from the secondary bronchial disease. You will find as you advance in the study of general pathology, plenty of examples in which diseases of structure or of deposition are suspended or replaced by purely nervous affections. Explain it as we will, the general proposition appears true, that the nervous symptoms, comparatively speaking, are but slightly developed in the fever of the lower classes, while those indicative of nervous disease are much more prominent; and conversely that in the upper ranks symptoms indicative of irritation of the mucous surfaces are less developed, while the nervous symptoms are severe; and this, perhaps, may throw some light upon the doctrine which has been long held by many, that the mortality of fever is greater in proportion as we ascend in the scale of society."—(*Clinical Lectures on Fever*, No. 7.)

Quickness of Pulse after Fever.

"There is a case in the small fever ward to which I would wish to direct your attention. Although the patient has convalesced after a long fever, and is now gaining flesh and strength, we have found that the pulse continues rapid. Now, this is a circumstance which must always excite suspicion. In this patient the signs of abdominal and pulmonary lesion have disappeared, as well as the characteristic expression of what may be termed the condition or state of fever,—yet, we find that his pulse does not correspond with the signs of improvement in all the other functions. It was suggested by Laennec, that the rapidity of pulse in patients after fever might depend on softening of the heart; but we shall see by and by, that the true typhous softening of the heart, so far from inducing rapidity of pulse during convalescence, has much more frequently the effect of making it slow; not only slow as considered with reference to the condition of health, but actually falling below the ordinary standard. * *

"These cases of quickness of pulse are of two kinds. In one class the pulse has never lost the rapidity it attained during the fever; or it has, perhaps, come down fifteen or twenty beats in the minute, and its rate then remains stationary. In the other cases the pulse, which had become quiet, rises to 100 or 120, or even higher, and remains at that rate for days together, without our being able to detect any cause for this increased rapidity. This, I think, is the worst case of the two; at least, it appears more often to indicate a new pathological change.

"The local diseases which have been found most frequently to attend this condition are of two kinds; one of them is tuberculosis —the deposition of tubercles in the lungs and other parts; the other is the existence of a secondary reactive inflammation in the mucous glands of the intestines. To this subject Dr. Cheyne long ago drew attention, in speaking of the imperfect convalescence in typhus fever; and he gives several cases in the Report of the Hardwicke and Whitworth Hospitals, in which patients had recovered well from typhus fever; had, to all appearance, regained a certain degree of strength; had regained their appetite: but they showed no disposition to leave their beds; the pulse gradually got quicker and quicker; the belly swelled; diarrhœa came on; and the patients died with symptoms of disease of the intestinal canal. Upon dissection, extensive ulceration of the mucous glands was found in the intestines.

These are the two most common of the local diseases which you should suspect when you have a patient who has gone through a long fever with the pulse continuing or becoming very quick.

"But now suppose that you examine such a patient with great care. You percuss his chest; you examine the state of his respiration in every way, and you cannot satisfy yourself that there is any disease in his lung; and you will recollect what I mentioned to you at our last lecture, that in most cases of this tuberculosis after typhus there is great constitutional suffering. Well, you may make up your mind, from the absence of all these signs, that the patient is not becoming tuberculous, at all events. When you proceed to examine the abdomen, you will find, perhaps, that he has a good appetite; that his thirst is gone; that the belly is hollow and soft, and there is no tumefaction of it; that there is no tenderness on pressure anywhere; no throbbing of the abdominal aorta; no tendency to diarrhœa—in fact, no one symptom of disease of the mucous membrane of the intestine. And yet, as in the case above stairs, you have a pulse with this unpleasant degree of quickness. I rather think that this man's pulse is now quicker than it was on the twenty-first day of his illness; and it makes me extremely uneasy about him. Now, gentlemen, suppose that you did not find either disease of the lung or disease of the abdomen, what should you suspect? Generally, in those circumstances, you may suspect that the patient will be attacked by phlegmasia dolens; for we have seen a considerable number of cases in which, after fever, where the pulse continued rapid, this disease exploded. It is, I think, more likely to occur in the non-petechial than in the petechial cases; it is more likely to occur in the long fevers than in the short fevers; it is very liable to arise in patients who have had a fever running on beyond twenty-one days, or thirty days, or forty days. In these patients, after the true symptoms of fever have subsided, they remain with a rapid pulse, and, probably, in a week or ten days, symptoms of phlegmasia dolens come on; and the disposition to this venous inflammation is very curious in them, for you will often find that the patient has two or three distinct attacks of it. It may affect one leg, and you will get the patient through that attack; still the pulse does not regain its natural rate. After a week or ten days, the other extremity will be attacked: and it is even possible that a third seizure may occur, as it were, a relapse of the disease in the part first affected; and in this way patients will go on laboring under these attacks and their consequences for months together. In most instances, however, the patients recover. In most of the cases I have seen, of this acute phlebitis consequent upon fever, there was distinct notice of the invasion of the disease—that is to say, the patient was attacked with pain in the calf of the leg. He is attacked, say in the course of the night, with pain in the calf of the leg; and when you come, in the morning, you find him exhibiting all the characteristics of the disease—a large swelling, pain on pressure, and all the other symptoms. Sometimes you find a cordy state of the superficial veins; at other times not. When you can feel a deep-seated vein, you will sometimes find it in a hard and cordy state.

"I think it right to warn you of these curious circumstances; for I am sure that in the course of your practice, you will often be in this position, that you will have a patient recovering from fever, and going on in every respect well, except that the pulse does not come down. The rule, then, is, that if the most minute examination fails to detect disease in the great viscera, you may expect the occurrence of phlebitis.

"The term, phlegmasia dolens, under these circumstances, is not always applied correctly; for the disease is not always painful. We have seen a few instances in which the discovery of the local affection was entirely accidental. Of course, you will say that I am prophesying that the patient above stairs will have phlegmasia dolens; all I say is, that he is in that state which would justify you in suspecting something of the kind.

"I have mentioned the rapid deposition of tubercle, ulceration of the intestines, and phlebitis of the extremities, as the diseases we have found to occur most commonly in these instances of unaccountable quickness of pulse after fever. Doubtless, there are many more examples of local disease arising under these circumstances; but the general rule will hold good, that this symptom foreshadows a disease, which, though at first latent, will before long become manifest. These diseases are generally attended with much irritation, and the condition of the patient is rather one of irritation, or inflammation if you will, than of essential fever. And this is one of the illustrations of a circumstance often observed by the clinical investigator, namely, the change of character of disease, locally and constitutionally, in the same patient, and within a not very extended period. The typhous condition, generally considered, will change into a different state. The essential or general morbid state will disappear, and a local irritation, with its symptomatic fever, becomes the prominent malady. Nay, you will sometimes find that the very condition of a local disease, formed during the first, the typhous or essential period of the disease, will itself change, and take on the character of what is termed by some a 'healthy inflammation.' You may sometimes see this well illustrated in that terrible disease, accompanied by purulent deposits, in many of the articulations. The patients may throw off the typhoid state which attends the earlier periods of the disease, and then the affection of the joints seems to change in its nature, and take on the characters of ordinary arthritis. I have only seen this, however, where one or two of the larger joints had been effected with the primary disease; and it was most remarkable to witness the changes both in the constitutional state and the local affection. It was no longer necessary to use general stimulation; it was no longer improper to employ local antiphlogistic measures."—(*Clinical Lectures on Fever*, No. 10.)

Art. II.—*Lectures on the Spinal System and its Diseases, delivered at the Chatham Street School of Medicine, Manchester.* By Marshall Hall, M. D., F. R. S. L. & E., Foreign Associate of the Imperial Academy of Medicine of Paris, &c.

Dr. Marshall Hall then addressed the crowded audience as follows:

Gentlemen: I have accepted, with much satisfaction, the invitation of your able teachers, to expound to you the Anatomy, Physiology, and Pathology of the Spinal System. In doing this, I shall avail myself of experiment and reference to clinical observation. I wish to demonstrate to you the immediate and intimate connexion between physiology and practice. You may indeed regard these lectures as a specimen of a work which I am preparing for the press, designed specially for the medical student, to be entitled "Physiology *in the Laboratory and the Clinical Ward.*"

I propose, in that work, to effect the separation of mere empiricism from medicine forever.

Physiology was divided, by the illustrious Bichat, into two sysems, or sub-systems,—*the animal and the vegetative.*

The nervous system has, in a correlative manner, been divided into *cerebro-spinal and the ganglionic.*

Both these divisions are defective. There is a *third* sub-division of the nervous system, hitherto undetected, which forms an essential link with the other two, and which I have designated *the Spinal.*

Observe this frog. You are all familiar with its natural movements. I divide what was termed the cerebro-spinal system just below the occiput.

I stop for a moment to call your attention to a most interesting phenomenon. I seize one of the toes of a posterior extremity between my thumb and finger, making a little gentle pressure and movement. No effect is produced. In a minute or less, you will see how different the result will be. The animal is in the state of *shock;* just such a shock as we observe in practice, as the effect of a violent fall from scaffolding, or a crushing accident from machinery. I repeated the experiment. You now see the manifestation of returning power in energetic movements.

This experiment, repeated with care, would afford the means of investigating the phenomena of shock, and of a principle of practice. For example: after a violent comminuted fracture, is it better to amputate immediately or after the lapse of a certain interval of time?

I again call your attention to my experiment. Observe how energetic the movements of the frog now are on exciting the skin of the foot; how similar, too, to ordinary voluntary motions! Who would not be beguiled into the conclusion that in this animal, sensation and volition still exist?

Nevertheless, if my experiment has accurately divided the cerebrum and cerrebellum from the medulla oblongata, and if I induce quiet in the animal by gently controlling its movements, as you see, it will never move spontaneously more! Nay, though I place it in a position which, if sensibility remained, *would be* the most painful, yet, quiet once induced, and *all* external excitation avoided, it will never move again. It might be left in such a position, and if so protected from excitement, it would be found the next day in the same position still.

But again I rub the toe between my thumb and finger, and again it moves; it jumps, and it crawls; the latter movement consisting, in fact, in a series of movements induced by the renewed contact of points of the cutaneous surface with the surface of the table.

What is the *rationale,* what the relations, of these singular phenomena?

Gentlemen, nearly a quarter of a century ago I was engaged in the investigation of the circulation of the blood in the batrachian reptiles; I had been examining the pneumonic circulation in the *triton;* the animal lay on the table; I removed the head and the tail. On touching the latter by the point of a probe, it coiled up! I asked myself the questions which I have just proposed to you. From this simple fact and observation have resulted the discovery, the elaboration, and the application of the SPINAL SYSTEM—that system which, as I have said, I am about to expound to you in these lectures.

I again recur to my question, what is the *rationale,* what the relation to *life,* to anatomy, and to physiology, of this phenomenon? I have removed the cerebrum and cerebellum; it does not therefore depend upon these. But I proceed further; I now remove the whole of the internal viscera, and, with them, the whole of the ganglionic system. Still the movements continue as lively as ever!

Observe this physiological preparation well. There is not in the Hunterian Museum a preparation more replete with the deepest interest. It is the demonstration that when the centre of the cerebral system and when the entire ganglionic system are removed, there still remains a *third* system, independent of each and of both, *sui generis,* autocratic!

Place this specimen of the decapitated, eviscerated frog in your museum—the demonstration of the distinct and independent spinal system—in memory of this day!

Do not be disconcerted that I show you these things in so humble a creature. *All* physiology exists in the caterpillar or the butterfly, if we could only detect it. The least of God's works is infinite. I began by stating to you that hitherto anatomists and physiologists had divided the nervous system into the cerebro-spinal and the ganglionic. I have analysed these, and I have demonstrated to you, that in the midst of these two there is a *third* system. As the chemist detects, in a mineral hitherto regarded as consisting of certain elements—say silver and gold—a new element, platinum, so I, in the midst of the celebro-spinal and ganglionic nervous systems, have detected a new element—the *spinal;* and of how great moment this is I must proceed, without further delay, to unfold to you.

I revert once more to this interesting preparation: the cerebral centres and the ganglionic system are removed; what remains? what is its anatomy, its principle of action, its physiology, its pathology, its therapeutics? what its relation to *life* and *death?*—questions of the deepest interest.

In the first place, observe me now destroy, in this decapitated, eviscerated frog, by means of this needle, the spinal marrow. Now all is still! I irritate the toe in vain. I wait in vain for recovery from shock. All the interesting phenomena formerly manifested are extinct! They depend, then, on the spinal marrow, *their* spinal centre!

In the next place, I take this preparation, which is similar to the former one, viz: without cerebral, without ganglionic systems, and I denude the lumbar nerves. The excited movements in both lower extremities are, as you see, perfect. I divide this *right* lumbar nerve; the excited movements in the *right* leg, and in that leg only, are extinct!

The excited reflex movements depend, then, not only on the spinal *centre*, but on the nerves connected with that centre.

You observe the phenomena still perfect in the *left* leg; I remove the skin from the foot; the excited movements are again extinct. They depend, then, in this instance, on the integrity of the integuments of the part to which the excitation is applied. In these integuments, in fact, resides the *origin* of those nerves on which these excited reflex actions depend.

But now, gentlemen, I must beg your best attention whilst I explain more particularly the nature and forms of that nervous structure which constitutes the spinal system.

If I either strip off the skin, or destroy the spinal marrow, or divide the lumbar nerve, the phenomena cease. They depend, then, on the *origin* and on the *course* of certain nerves, and on their spinal *centre*.

But a little more minutely: If I remove the origin of this structure, by removing the integument; or if, within the spinal canal, I divide the *posterior* root of the spinal nerves; or if I destroy the spinal marrow itself, or, if I divide the *anterior* roots of the spinal nerves; or, if I divide the nerves in any part of their course *to* or *from* the spinal marrow, I annihilate all reflex phenomena.

Here, then, is a new *Demonstration:* all reflex actions depend on an *in-going* nerve, with its *origin* in the tissue excited; on the spinal centre; and on an *out-going* nerve, with its *termination* in the muscles. These constitute a *nervous Arc*, consisting of parts *essentially* linked together; *a new kind of Anatomy*, established and demonstrated for the first time.

Each *special* excited, reflex, or diastaltic action (so I have designated it, because it is excited *through* the spinal centre), has its *special* diastaltic nervous Arc. Of these *Arcs* there is an extensive *series* in the animal economy. Together with their continuous *centres*, they constitute the spinal system of connected eisodic (or in-going) and exodic (or out-going) nerves.

Gentlemen, no facts in chemistry or physics are more demonstrable than these; none more valuable in their relations respectively; whether we contemplate life, disease or death, the spinal system becomes now our constant guide.

Let us now, gentlemen, consider what we have within the spinal theca. The sensations of the hands, feet, &c., imply an uninterrupted connexion between those parts and the cerebrum, upwards. The acts of volition of the hands, feet, &c., imply a similar uninterrupted connexion downwards. There are, then, *two* nervous conductors, whether distinct fibres, or whatever they may be, along the spinal marrow, which, in this sense only, may be viewed as a *spinal Chord of nerves*, of sensation, and of volition.

But when the cerebrum is removed, when all sensation and volition are extinct, if we excite the skin of the lower extremity in the frog, the anterior extremity is moved, and *vice versa;* phenomena which cease either on removing the spinal marrow, or dividing the lumbar nerves. How then are we to view these structures?

The lumbar nerves convey sensation and the mandates of volition to and from the cerebral centre, when that remains; they convey the eisodic excitor influence, and the exodic excitor influence, when that centre is removed. The spinal centre is the general key-stone to the diastaltic arcs.

As certainly as the lumbar nerves in the frog convey sensation and volition, so certainly do they convey these other two influences. If Sir Charles Bell has proved that such nerves are *double,* I have proved them to be *quadruple.*

The posterior roots of the intra-spinal nerves are not only sentient, but eisodic excito-motor; their anterior roots are not only conveyers of the influence of volition, but of exodic excito-motor. There is precisely the *same kind* of proof of one of these functions, as of the other. The spinal marrow; the lumbar nerve in the frog; the sciatic in the human subject; are each and all *quadruple* in their mode of action; I do not say in their structure.

There is an additional fact or series of facts: the spinal marrow is the conductor of the influence of emotion, and of that of undue acidity in the stomach, when these affect, the first directly, the second in a reflected manner, the action of the heart—a subject requiring new and careful investigation.

Enough has been said, then, gentlemen, to convince you that the spinal marrow is no mere chord of nerves. Enough has been said to show you that it is intimately connected with the ganglionic system. And especially, enough has been shown to prove to you that it is the great centre of a series of actions in the animal economy.

You will be still more impressed with the importance of the spinal system, when I tell you that, besides the phenomena which I have brought before you, it is the nervous centre and agent in *all the functions of ingestion and of egestion* in the animal economy, in *the entire class of Convulsive Diseases* in pathology, in the action of a certain *class of Remedies,* and in the whole of that department of medicine denominated *Obsteterics!*

Having made these observations, which relate principally to the *Anatomy* of the spinal system, I must now call your attention to its *principle of action.* This I have proved, by a series of the clearest experiments, to be the *vis nervosa* of Haller. But this celebrated physiologist, Bichat, and Professor J. Muller, all laid it down as a *law,* that this power acts in the direction *downward* only. As long as this idea prevailed, it is obvious that it *could* have no application to *physiology.* For how could the spinal marrow or an exodic nerve be irritated physiologically? Its application was accordingly limited to pathology.

By a series of experiments on the turtle, I proved the *vis nervosa* may act UPWARD and INWWARD as well as OUTWARD and DOWNWARD, and then its application to physiology became evident.

If you remove the head and viscera in the turtle, and excite an eisodic nerve between the upper and lower part of the animal, ALL the extremities are moved. The influence of the *vis nervosa* has been INWARD, and UPWARD, and in all other directions, and not DOWNWARD only.

It now became easy to explain the various acts of ingestion, retention, egestion, and exclusion, depending, as they all do, on an eisodic excitement.

I may now, before entering on this topic, give you a general idea of the nervous system as we now view it.

The cerebrum, the cerebellum, and, in a certain sense, the medulla oblongata, may be regarded as the centre of the cerebral system, of the nerves of special sense, and of volition, of intellect and of the passions, of pleasure and of pain. By its means we are placed in relation to all that is *external, psychically.* By its means we perceive, by its means we seize and use, external objects.

There is good reason to believe that intellect is seated high, the emotions lower, and the faculty of pleasure and of pain lower still, in their general cerebral centre.

Below the centre of the cerebral system is that of the spinal system, and its analogue in the articulata, &c. The spinal centre includes the medulla oblongata and medulla spinalis. It may be divided into—

1. The Medulla Oblongata, the spinal centre principally of the acts of ingestion and of egestion, by which the preservation of the individual is effected, and especially those of deglutition, respiration, &c. With this centre, the pneumogastric, the diaphragmatic, &c., of such momentous importance in these acts, are essentially linked;
2. The Brachial Enlargement;
3. The Femoral Enlargement; and
4. What, I think, may be designated the *lower* Medulla Oblongata, the analogue with its nerves of the organs of generation, of the upper with its pneumogastric; and the spinal centre in the acts for the perpetuation of the species.

In each of the acts of ingestion and egestion to which I have alluded, there is the essential agency of a diastaltic spinal arc. The pharynx and larynx are excited by eisodic and exodic branches of the pneumogastric; the pneumogastric is the internal excitor of inspiration, acting through the spinal centre and the diaphragmatic and intercostals.

Similar diastaltic nervous arcs constitute the nervous media through which emission, conception, parturition, &c., are effected. In all these are nervous ORIGINS in exciting surfaces, an eisodic nerve, the spinal centre, an exodic nerve, and muscular terminations. The LAW OF ACTION, the mode of action, the channel of action, are in all identical or similar. All have the same object or objects—ingestion, retention, egestion, exclusion.

Can anything be more simple and scientifically beautiful?

The spinal centre, with its nervous arcs, and the muscles in which these terminate, are the dynamic agents which accomplish that "TOURBILLON" so eloquently described by Cuvier.

The ganglionic system relates to all that is WITHIN, governing the *peri*staltic actions, assimilation, the secretions, the excretions, &c.

But of these functions I must treat as cursorily as I have done of the cerebral system.

They are greatly under the influence of emotion, and of sympathetic or synergic action through the spinal centre. We have only to observe the effect of derangement of the stomach, or of eroded viscera, on the action of the heart, the skin, &c., in connexion with experiment, to arrive at this conclusion.

The experiments to which I allude are the following: Let the head be removed in a frog, the spinal marrow remaining, and the circulation be ready to fail; if we now crush the stomach or a limb with a hammer, the action of the heart ceases. Let the conditions be the same in another frog, with the addition that the spinal marrow is also removed: in this case, no influence is perceived, on crushing a limb or the stomach, on the action of the heart. Now, the difference is the presence or absence of the spinal centre. This experiment, however, requires careful repetition.

Now, gentlemen, I think I may hope that you have a sound knowledge of the spinal system, as far as it extends; for it is founded on experiments which your own eyes have seen, and which I think you will not forget.

As in the present lecture I have brought before you the Anatomy and Physiology of that system, I propose, to-morrow, to treat of its Pathology.

You will, if I am not mistaken, find your knowledge of the spinal system the key to the diagnosis of the diseases of the nervous system. It is to these, in some degree, what the stethoscope is to diseases of the heart and lung, the administration of a new kind of knowledge being as that of a new mode of observation; and if to know the disease is *not* half the cure, it *is* the whole of the treatment.

To-morrow evening, then, I propose to discuss the subject of the Diseases of the Spinal System.

LECTURE II.

THE PATHOLOGY AND MODES OF DEATH IN DISEASES OF THE SPINAL SYSTEM.

GENTLEMEN: As I stated at the close of my former lecture, I now proceed to bring before you the Pathology—the LIVING Pathology, the Physiology—of the Diseases of the Spinal System.

Already I have said that the spinal system is the source and seat of THE CLASS OF CONVULSIVE DISEASES. Among these, INFANTILE CONVULSION, PUERPERAL CONVULSION, but especially EPILEPSY, take the chief rank.

Epilepsy has received a variety of designations, such as *morbus sacer, morbus Herculeus,* expressive of its formidable character. It has long been regarded as the *approbrium medicorum.* Even Esquirol, in his excellent work, "Les Maladies Mentales," expresses himself in regard to it in the following terms:

"Les symtomes de l'epilepsie sont tellement extraordinaires, tellement au-dessus de toute explication physiologique; les causes de cette maladie sont tellement inconnues, que," &c.

I am almost afraid, after making these statements, to say what are my own views of this formidable malady, the result of my own labors. And yet I may not withhold the truth. I will therefore frankly tell you that I regard this *approbrium medicorum* as removed forever. I think no disease is better understood, in its physiology or pathology, since the detection and application of THE SPINAL SYSTEM—than EPILEPSY! It CONSISTS, in fact, of Direct, or Reflex Action, and dire Effects!

I am not blind to the many obscure points in the pathology of this and the other formidable diseases of this class. But in what department of medicine is there not much still left for the physician to discover? It is in their comparison with other diseases that I regard the inexplicable epilepsy as no longer inexplicable.

I must commence my explanation by drawing your attention to three most important physiological facts:

If we puncture or lacerate, or otherwise injure the cerebrum or cerebellum, or the cerebral nerves of special sense, in every possible manner, we observe NO RESULTS, NO PHENOMENA, no expression of pain, no excited movements.

The cerebral system in all its parts is, in this respect, *in*explicable.

But if we touch any part of the spinal system, and especially the spinal centre, with the point of a needle, ever so slightly, there are immediately excited muscular movements, spasm, convulsion.

The spinal system is, in all its parts—*excitor, excito-motor*.

These important facts constitute the foundation of all our knowledge of the diseases of the nervous system, and are the very source of all *diagnosis* in regard to them.

For the same facts, as is proved by clinical observation, hold in regard to the human subject.

By experiment and by observation, then, we are led to these conclusions:

No lesion of the cerebral system, limited to the cerebrum, CAN be attended by spasm or convulsion.

No structural lesion of the spinal system, short of destruction, CAN occur WITHOUT exciting spasm or convulsion.

If, in affections of the cerebral system, we observe spasm or convulsion, it is because it is NOT limited, in itself or in its effects, to the cerebral system. Thus, congestion of the centre of the cerebral system may, as in hanging, become extended to that of the spinal system, and then spasm or convulsion supervenes.

Or affections of the spinal centre may consist in gently applied PRESSURE, not in lesion of tissue, and then paralysis, and not spasm or convulsion, will be observed. Or it may consist in sudden or violent SHOCK, or utter destruction, and then, I need scarcely say, that paralysis, and not spasm or convulsion, will occur. All this we have seen demonstrated by experiment; all this you will see hereafter in your observation in the clinical, and especially the surgical ward.

What a means of *diagonis*, then, have we obtained by these simple physiological facts! How has physiology become our guide in practice!

I have thus explained to you, gentlemen, how disease of the cerebral centre may, by pressure downward, affect the spinal centre. But another question arises: How does a disease of the spinal system, as a pure convulsive malady, affect the cerebral?—for such is the frequent event, as we observe in epilepsy.

Observe what occurs in the most MARKED cases of this dire malady. The head becomes fixed, or there is torticollis, by the action of THE MUSCLES OF THE NECK—trachelismus; the jugular and other veins of the neck are compressed; the capillary system of the neck, the face, the intra-cranial structures congested; the veins start, the arteries throb; the CEREBRAL centre becomes implicated. ALL IS INTELLIGIBLE! ALL IS EXPLAINED!

Affection of the centre of the cerebral system is extended to that of the spinal system—the medulla oblongata—by downward pressure: affections of the spinal system are extended to the cerebrum, by *trachelismus!*

That ALL this is so, is demonstrable. That it is ALWAYS so, is, perhaps, what I ought not, however disposed to do so, to assert. And, gentlemen, does it not constitute a beautiful specimen of the PHYSIOLOGY OF DISEASE? But such is the whole of our recent views of epilepsy and the CLASS of convulsive diseases, as observed in the clinical ward, to which I must now recur.

And first, pray observe with me an experiment or two.

I have removed the cerebral centre in this frog. Its spinal system is still most lively and energetic. I take and rub the toe between my thumb and finger; you observe the almost convulsive movements produced: I now touch the upper part of the spinal centre with this needle: the animal is thrown into the most violent convulsions!

Gentlemen, these experiments are TYPES of disease; they are the types of epilepsy and other convulsive diseases.

The FIRST is the type of EX-CENTRIC epilepsy;

The SECOND is the type of CENTRIC epilepsy.

For the first was induced by an excitant applied to a part of the spinal system at a distance from its centre; the second to that centre itself.

So it is epilepsy; so it is in convulsive diseases generally, in the human subject! Do not these simple and illustrative facts interest you? They are of the deepest interest.

Do you not perceive HOW dentition, and gastric and enteric and uterine irritation, may excite spasm or convulsion, even epilepsy? And do you not now perceive that ex-centric epilepsy is no more an *approbrium medicorum* than infantile or puerperal convulsion; for that it is equally intelligible?

You see again the violent convulsion which I excite by again touching the spinal centre in this frog by this needle.

Such is the dire state of things in centric epilepsy, whether this be of organic origin, or have become organic in its course; whether it be congenital, on one hand, or inveterate on the other.

The cases of epilepsy which occur in private practice are, for the most part, of the former or excentric kind, and CURABLE, however, for many reasons, difficult to cure. The cases which we see in the lunatic asylum, and especially in the work-house, are generally centric, and, must I not add, too generally incurable?

Allow me to draw your attention to this TABLE. It has cost me much labor; but it contains in a page, a volume. You will find it in the Lancet for 1850. Procure it, or copy it, and study it well. For, allow me to say, I know of no such specimen of this most interesting pathology. The CHAIN of events in epilepsy and other convulsive diseases, is pursued in it, LINK BY LINK. The CAUSES are arranged in this first column, the principles and modes of treatment in this last; the *rationale*, the various stages, forms, and complications in the intermediate ones. It would occupy us too long, were I to enter into its details. I have only time for a rapid sketch.

The ex-centric causes act on eisodic nerves, thence on the spinal centre, and thence along exodic nerves, on the various muscles. Of these, few, many, or all may be affected, and the malady may be the very slightest or the very direst. Amongst the rest—I was about to say, chief amongst the rest—are the muscles of the NECK AND OF THE LARYNX.

By the contraction of the muscles of the neck the veins of the neck are compressed, as I have already noticed; and the extra-cranial and intra-cranial tissues and organs become affected with venous congestion and all its consequences. Nay, I am disposed to say that, in every case in which there is such venous congestion of the neck, face, eyes, brain, it arises from this trachelismus, latent or evident. I do not wish you, however, to adopt this opinion without examination; but rather to subject it to a most careful investigation for yourselves.

By the contraction of the muscles of the larynx in laryngismus, this vital inlet to the respiration, combined, as it usually is, with BREATH-STRUGGLES, I believe the direst form of epilepsy, with its direst effects, as coma, mania, dementia, &c., to be produced.

I do not say that these effects may NOT arise in cases in which there is only trachelismus and no laryngismus; but I am convinced that they are CHIEFLY the effects of laryngismus; and hence they have subsided in cases in which the laryngismus has been disarmed by tracheotomy, as I shall have to state at length in my next lecture.

And now, gentlemen, you perceive in what sense epilepsy may be regarded as a cerebral disease. Cerebral in its very ORIGIN it can never be. It may be intra-cranial in its origin, because within the cranium there are many tissues, as the membranes, from which eisodic nerves arise, many eisodic nerves, the fifth especially, pursuing there a part of their course; and the medulla oblongata,—all which may be excited by the presence of an exostosis, a tumor, a variety of diseases. But I repeat that no disease of the cerebral centre, limited to that centre in itself and its effects, does or can produce epilepsy. Yet every day we read in medical writings of affections of the cerebrum inducing epilepsy. Shall I give you an example of this? For once I will relinquish the gravity of my subject, and present you with a specimen of modern pathology, so called: "*I hold* (!) that the peculiar features of an epileptic seizure are owing to the gradual accumulation of morbid material in the blood until it reaches such an amount that it operates on the *brain* (!) in, as it were, an *explosive* (!) manner. In other words, the influence of this morbid matter, when in sufficient quantity, excites a highly-*polarized* (!) state of the brain," &c., &c.

If such feebleness existed alone, I would not add another word. But I am constrained to add that this feebleness is associated in the author whom I have quoted with at least an equal degree of malignity, and in him assuredly the *odium medicum* is NOT extinct.

Exciting causes: the spinal system; the neck; the encephalon; such are the links of this chain of pathology. There remains another to which I must now draw your especial attention: it is, the medulla oblongata, with its PNEUMOGASTRIC NERVE.

I have already adverted to laryngismus as giving to epilepsy, and convulsions generally, its most formidable character. This form of laryngismus is SPASMODIC OR CONVULSIVE, excited through the spinal system.

But there is another form of laryngismus. After a severe epileptic convulsion, the patient is left in a state of *coma*, or, as it may be termed, of SIMPLE APOPLEXY. This condition may prove fatal. The respiration becomes stertorous—that is, there is laryngismus. But this laryngismus is very different from that formerly described: it is less complete, but more persistent; it is, indeed, permanent; some one said, in rather familiar phrase, "The patient snores his life away." This laryngismus is NOT, like the former, spasmodic, but paralytic. It is owing to compression or congestion—an apoplectic state—of the medulla oblongata, and PARALYSIS of the pneumogastric nerve, in which every branch, as well as the recurrent laryngeal, is implicated.

Apoplexy of the medulla oblongata; paralysis of the pneumogastric nerve! Gentlemen, did you ever hear of these expressions before? If, then, I DEMONSTRATE these things to you, you will not have assembled here and listened to me in vain.

Legallois—the illustrious Legallois—divided the pneumogastric above the origin of the recurrent. The larynx became partially closed. The breathing was STERTOROUS. In a word, every phenomenon was observed which I am about to describe to you as occurring in the coma or simple apoplexy observed after a severe epileptic seizure.

And what do we observe? We observe paralytic laryngismus, impeded respiration, augmented apoplexy; we also observe—or rather, I have observed—A DIFFUSED BRONCHIAL RATTLE, the effect of PARALYSIS of the bronchial and pulmonary branches of the pneumogastric!

Here a most interesting phenomenon presents itself. The cerebrum is not essential to LIFE. How, then, does apoplexy, simple, cerebral apoplexy, destroy life? It does not do so. Apoplexy only destroys life when, by its congestion by downward pressure, it implicates the medulla oblongata and its pneumogastric nerve. It is by the apoplexy of this medulla and the paralysis of this nerve, that life is, in effect, destroyed!

Generally the patient dies of paralytic laryngismus, or of laryngeal asphyxia. From this danger he is rescued by early tracheotomy.

But if tracheotomy BE performed, but performed too tardily, the patient, however saved from LARYNGEAL asphyxia, dies of BRONCHIAL asphyxia!

There are other branches of the pneumogastric nerve—the cardiac and the gastric. The heart and the stomach participate in the paralysis of the general pneumogastric.

The observant physician will observe palpitation as a symptom in some cases of epilepsy. This is explained by excitement of the cardiac branches of the pneumogastric.

In other cases, there are hiccup, eructation, acidity of the stomach; the effects of the excitement of the gastric branches of this composite nerve.

As in these cases there is morbid ACTION in the heart and stomach, so in deep epileptic coma there is FAILURE of the powers of these organs.

The pneumogastric nerve is not more involved in epilepsy than in other convulsive diseases. All the phenomena just described as observed in the former, are again met with in the latter, only, of course, modified by the exciting causes, and the conditions of age and sex.

In infants there is the same or similar action of the muscles of the neck, and of the larynx and respiration. In puerperal convulsions the symptoms are identically those of epilepsy.

There is a form of epilepsy which I have not yet noticed. It is the *epilepsia syncopalis.* The patient, instead of turning purple, turns pale and ghastly. Sometimes this syncope is FATAL!

So it is in the laryngismus stridulus of infants. The little patient not unfrequently dies suddenly—too suddenly to be the effect of asphyxia. The case is cardiac, syncopal.

Both these cases are affections [*shocks?*] produced through the medium of the pneumogastric nerve.

But, gentlemen, you remember that I spoke in my lecture of yesterday, of a LOWER medulla oblongata, and of a LOWER analogue of the pneumogastric. These, too, are influenced by the convulsive seizure.

The laryngismus stridulus is frequently excited by enteric irritation. This is also frequently attended by fret of the bladder.

Epilepsy is frequently induced by enteric and uterine irritation, and is sometimes attended by involuntary evacuations of the bladder, rectum, &c.

The urine is frequently morbid in both cases.

There is something in all this ANALOGOUS to the modes of action of the medulla oblongata and the pneumogastic nerve.

It is obvious that both these portions of the nervous system form ONE. Both are liable to be affected in one and the same convulsive seizure.

Perhaps the LOWER portion of this system is most clearly isolated in what relates to OBSTETRICS. To excite the cervix uteri is frequently to excite abortion. To excite the cervix uteri during parturition, is to excite the uterine efforts. But to excite the cervix uteri during parturition is, also, frequently to excite a puerperal convulsion! These are facts familiar to every experienced practitioner. They are PROOFS that "a meddlesome midwifery is bad."

Other facts of the same kind are constantly elicited in practice: to excite the rectum, by the pressure of the fingers backward, excites uterine action; and it is well known that the excitement of the internal surface of the uterus by the hand, introduced in certain forms of hæmorrhage from inertia, excites the uterus to energetic contraction.

All this is accomplished through the LOWER medulla and its analogue of the pneumogastric.

I think that a subject very inscrutable hitherto will receive elucidation from these studies—that of sterility, inertia of the uterus, &c., &c.

The influence of the nerves and passions, with their course of action, their seat and their destination, their physiological and their pathological relations, forms also a most interesting subject of inquiry—a subject, however, to which I can only slightly allude on this occasion.

One point I wish to notice, in conclusion. I have, I trust, in unravelling the mystery of epilepsy, removed one of the *opprobria medicorum.—London Lancet.*

ART. III.—*On the Treatment of Pulmonary Consumption.*

Many years have not passed since the treatment of pulmonary consumption was almost confined to the palliation of urgent symptoms, and no encouragement was afforded for the expectations we may now occasionally entertain of witnessing permanent amendment under improved methods of management—expectations which may be cherished chiefly in cases subjected to treatment at an early period, and in those instances of advanced disease where cavities are distinctly bounded, and tubercular infiltration does not exist extensively in the lungs.

Even as respects palliative measures there has been of late some accession to our resources. In support of this assertion, let me briefly notice three distressing incidental symptoms—namely night perspirations, diarrhœa, and cough. In the treatment of night perspiration, sulphuric acid was formerly the remedy most commonly employed, and with very partial success. Other acids, such as the gallic and the acetic. are probably more effectual for the purpose.

Considerable abatement of the symptoms may often be derived from the use of a night-dress dipped in sea-water or a solution of salt, and dried; but a most important improvement in the treatment of this symptom is the administration of oxide of zinc at bed time, in doses of about four grains, combined with any anodyne extract, such as henbane or hemlock. This property of the oxide was first observed by Dr. Robert Dickson. The mode of action of the remedy is undetermined, but the relief induced by its administration is more decided than any other medicine with which I am conversant.

One of the most trying of the complications of phthisis is diarrhœa. It is not my present intention to attempt a description of the various modifications of this condition, but a few practical remarks on the subject may not be inappropriate. When diarrhœa is associated with intestinal ulceration, or with an appearance of the tongue and other circumstances indicating irritation of the mucous membrane, the diet, notwithstanding the existence of debility, must be bland and unstimulating. Instances dependant on a relaxed state of the intestinal exhalants may require astringents. The peculiarities of the individual case must determine whether we select the preparations of silver, copper, or lead. My experience, however, during the last six years, has confirmed my impression, that of all the remedies which have been recommended for this affection, there is none more generally available than trisnitrate of bismuth. This medicine combined with a little gum and magnesia, and when necessary, with Dover's powder, perseveringly employed, usually affects the object more permanently than other measures, and without inducing any opposite or collateral evils.

The variety of remedies employed for the relief of cough serves to show how intractable this symptom often proves; and I think we may assert that, till within a few years, sooner or later, opium in some one of its many preparations, has usually become the chief reliance of the practitioner in its treatment. I rarely meet with instances where the inhalation of chloroform, combined with three times the quantity of spirits of wine, fails to relieve; but there are objections to the indiscriminate use of so powerful a measure. Often the inhalation of camphorated spirits is equally effectual: sometimes the vapor of warm water, or infusion of hops. The simple expedient of swallowing a little oil slowly often gives more relief than the use of what are called intentional medicines. In some irritable conditions, tincture of aconite, in doses of four minims, is worth the trial. When expectoration is profuse, creosote, pyro-acetic spirit, infusion of pitch, or balsam of tolu, may be administered; but of all the remedies referable to this class, appropriate for cases accompanied with profuse expectoration, not one has proved in my hands so efficient as petroleum, or Barbadoes tar, the cough being frequently relieved, and the expectoration rapidly moderated, under its use.

On the treatment of hæmoptysis I need not dwell. Single doses of mercury, and a few saline aperients; antimony, even bleeding, may, in special cases, be requisite. Direct astringents, such as gallic acid and acetate of lead, may occasionally be required. In a larger proportion of cases, turpentine is the most satisfactory remedy, but not unfrequently it is inexpedient to attempt the sudden arrest of hæmoptysis, since, when moderate, it is rather useful than dangerous. Such are a few simple hints which I would venture to offer as derived from my own observations of the treatment of individual symptoms. It is not my present object to give an elaborate essay on the treatment of phthisis, but rather to confine my remarks to the statement of opinions either formed or confirmed by my special opportunities for investigation. I feel that a detailed review of the subject would scarcely harmonize with the broad principles which it was the object of preceding lectures to illustrate. The symptoms thus briefly noticed are but incidental evils springing from that error of the organism which I formerly described as exhibiting itself locally in faulty cell-formation, generally in defective blood, and disturbed, imperfect, hurried action. No satisfactory or systematic view can be presented on the subject of treatment without regard to the different degrees of progress of the morbid action.

The disease may be only threatened. Rapid growth, some approach to the phthisical physiognomy, a pearly or somewhat colored margin to the gums, observed in a member of a consumptive family although not considered an invalid, may be the chief indications of the impending disease. In such instances well arranged exercise, especially of the arms, as in fencing or archery, the adoption of judicious plans of education, and the appropriate choice of climate or employment may often avert decided mischief.

But supposing local pulmonary disease to be commencing, as evinced by a disposition to chilliness; a feeling of oppression under the sternum; gnawing sensations about the scapula; effort in making a thorough expiration; prolonged expiratory murmur; hæmoptysis;

expectoration, of a character resembling isinglass in appearance; a pulse evincing the characteristics formerly described—congestion should then be obviated. A dose of blue pill, followed by an aperient, may be administered. Sometimes the application of a few leeches applied over the threatened part, and the administration of liquor potassæ with infusion of cascarilla, may be advantageous.

But softening may occur, the second stage be established, with the clicking, or "humid crepitation," as an auscultatory sign, expectoration exhibiting, perhaps, elastic tissue under the microscope, as well as characteristic cells of tubercular character. The treatment must then be cautious, unstimulating, but strengthening; exposure to cold or heat must be shunned; change to a tropical climate is now dangerous, and even the excitement of sea air may do harm.

When the third stage is established, indicated by gurgling or amphoric respiration or cough, we have to adopt such treatment as shall strengthen the constitution of the patient, so as to become tolerant of the local disorganization, reparation of which can be expected only under very favorable circumstances and assiduous care.

Such general statements as those which I have offered will not, however, satisfy minds anxious to make a distinct and decided step in the treatment of this fatal disease. Do the modern acquisitions furnished by pathology, zoo-chemistry, and histology, assist us in establishing any principle calculated to determine the appropriate treatment? The chemical condition of the blood of the consumptive patient is, in some respects, analogous to that characterizing chlorosis; but it is not the true olichæmia of that disease, and iron will not cure, although it may often be beneficial as an auxiliary.

We have described the deviation from the natural condition in the process of cell-formation as the earliest local manifestations of phthisis. Will our knowledge in this respect assist our decision? Fat degeneration, tubercular degeneration, and cancerous disease, in their cellular relations, may be contrasted. Cancer-cells as compared with phthisical, have, perhaps, more of albumen and less of fat, but the nature of the action is more important than the attendant chemical conditions. In fatty degeneration, we have life failing; in tubercle, running out by undue rapidity; in cancer running riot.

Is there any kind of treatment calculated to moderate this undue action, and at the same time give tone? I have lately tried the influence of digitalis. The effect of this remedy in lowering the pulse is well known; but I have been interested to observe that the rule obeyed by the phthisical pulse is no longer strictly applicable when the sedative influence of digitalis has been produced on the heart. If the anomaly of pulse formerly described depends on the presence of the tubercular element in the blood, the restored susceptibility to change of posture might seem to imply that some effect is produced on the tubercular disease. It is worthy of note that some of the most able physicians of the last century attached great importance to the use of digatilis in pulmonary affections. Ferriar's remarks on the subject evince an honesty and intelligence which entitle them to our respect. "Digitalis," he observes, "has often quieted the pulse, relieved the cough and given the patient feelings of recovery." He adds, "the patient's ultimate recovery is not to be confidently expected, even when the pulse is reduced in velocity, and the symptoms are evidently mitigated by the action of the medicine. Many disappointments have taught me not to be elated by one or two instances of success, and I should deceive the public if I presented to them only examples of fortunate practice. To cure (such disorganization as we sometimes observe after death) would require an effort of the power which first created the living body."

It would be unreasonable to disregard the assertion made by so cautious and trustworthy a physician, that after seven years of careful experiment (from 1792 to 1799) he had come to the conclusion that digatilis, with iron for the scrofulous phthisis, with opium for the florid, enabled him often to hope for a cure under circumstances which would formerly have precluded all hope of recovery. On the whole, we may venture to suggest that the endermic introduction of digitalis, by means of a blistered surface may occasionally prove worth the trial, as an auxilliary measure, at the commencement of some cases of consumption.

The importance of careful and discriminating attention to the peculiarities of each individual constitution must not be overlooked; still there is one medicine so safe and, in a large proportion of cases so useful, that I shall be excused for giving it a prominent consideration in the remainder of the lecture. Perhaps there is no substance, the value of which has been in a short time established by so large an accummulation of evidence, as cod-liver oil. About ten years since, in my office as one of the Fothergillian adjudicators, some remarks in one of the competing essays, regarding the efficacy of this remedy in scrofula, induced me to try the medicine in consumption. As far as I am aware, the earliest extensive trial of cod-liver oil in London was made by me at the London department of the Hospital for consumption, and the results of that investigation were detailed to this society, the coarse kind, such as is used in tanning leather, being employed. Of the first thirty-seven patients, ten were greatly benefitted, and increased materially in plumpness and strength ; twelve were slightly improved ; twelve remained unchanged ; and three were obliged to discontinue the remedy on account of the nausea which it occasioned. Under the use of this oil all the symptoms were ameliorated ; the pulse became slower, the cough and expectoration lessened, the night perspirations abated, diarrhœa ceased, and the urine often ceased to exhibit the excess of uric acid. The diminished liability to hectic in patients thus treated furnished remarkable evidence that this variety of fever has more relation to a question of practical interest, whether cod-liver oil owes its efficacy to some ingredient not present in other oils. With a view to determine this question I tried various other oils, such as sperm and seal, and the result was a conviction that fish oils generally resembled one another in their remedial properties, although differing in their aptitude for digestive assimilation in the human stomach. It seemed to me an object of interest to determine whether other animal oils not derived from the liver possessed similar powers ; and in the year 1849 I made many experiments in the use of neat's-foot oil. Of the first fourteen patients to whom I administered the substance seven were essentially benefitted, (in three the disease was arrested ;) in five there was no obvious improvement ; only two lost ground. The oil of neat's foot, therefore, can fairly be compared with that of cod's liver, although, being equally disagreeable to the palate of most patients, it is not likely to come into general use. Dr. Radcliffe Hall, of Torquay, having incidentally heard of this remedy, gave it a trial, and published a favorable account of the effects in the *Monthly Journal* for July, 1852. This physician, not having seen the description of my experiments, his statements furnish an independent confirmation of my conclusions. Neat's foot oil would appear to be adapted to some cases in which there is too much irritation of the intestinal mucous membrane to bear the administration of the cod-liver oil.

I have also tried an animal oil obtained from a soft, solid fat, found between the parchment and the leather skin of animals. The most remarkable properties of this oil, are its very slight tendency to become rancid, and its freedom from drying properties. It seems not unreasonable to expect that it might prove as efficacious as neat's foot oil; but as yet I have not been able to trace any important advantages to its use. I have tried an oil obtained from a species of fish abounding on the Malabar coast, and frequently with encouraging results. The inefficiency of almond and olive oil, excepting when combined with phosphorous, I have already reported. The result of these trials at first induced me to distrust vegetable oils in general: but happening, eighteen months since, to have a patient engaged in a cocoa nut manufactory, it occurred to me to try the oil of this nut, which, from the nutritious qualities of the kernel, and the peculiar properties of the soap obtained from the oil, seemed worthy of special consideration. In the first instance I tried the common oil—sometimes the solid, sometimes the fluid part. Subsequently, I have used a purified oil, which is obtained by pressure from crude cocoa-nut oil, as expressed in Ceylon and the Malabar coast from the coperah, or dried cocoa-nut kernel, and refined by being treated with an alkali, which deprives it of its unpleasant smell and taste. It is then repeatedly washed in distilled water, in order to separate the alkali with the impurities and rancid matter of the oil. It burns with a feeble, blue flame, and is undrying. For the supply of this oil, and for much valuable aid in my investigations, I am indebted to Mr. George Wilson, of Messrs. Price & Co's establishment. Mr. Wilson has given to my suggestions the ready attention of an enlightened mind, and I am happy to bear witness to the value of the sympathy and co-operation which the well-informed laity can often render in our medical endeavors to apply scientific research to purposes of practical usefulness.

Of the first thirty cases of phthisis in which I administered the cocoa-nut oil, nineteen were much improved, five remained without material change, and only six got worse. Of the last twenty-three, fifteen were materially benefited, three remained unchanged and five became worse. Three of these five were in so hopeless a condition at the time of commencing the remedy, that my clinical assistant thought it scarcely fair to include them in the report. I was careful, for the most part, to avoid the concurrent use of any other medicine; and it is proper to mention, that a large proportion of the patients had previously taken cod-liver oil, and discontinued it from being disappointed of benefit.

Another oil which I have tried is that of the sunflower seed. It is slightly drying, and burns with a smoky flame, showing a large proportion of carbon. Although the sunflower seed is much used for feeding and fattening poultry, the oil has not, medicinally, afforded me much satisfaction. I have occasionally alternated it with the animal fat oil. Each of these oils has occasionally done a little good after the failure of the other, but no results have occurred worthy of record.

I felt curious to ascertain whether chemical science could suggest any explanation of the diversity of remedial properties in different oils, and, with this object, obtained from Mr. Dugald Campbell an ultimate analysis, which is subjoined, of some of the oils which I have employed:

ULTIMATE ANALYSIS OF OILS.

	CARBON.	HYDROGEN.	NITROGEN	OXYGEN.
Cod-liver Oil..........	80.18	14.72	0.246	5.854
Neat's-foot Oil.........	64.32	12.50	0.064	23.106
Cocoa Nut Oil.........	69.62	12.49	0.060	17.830
Olive Oil..............	69.38	13.47	0.058	17.092

It will be observed that cod-liver oil differs materially from the other oils in its elementary composition. The remarkable difference apparent between the proportions of these elements, especially of carbon and oxygen, in cod-liver oil, as contrasted with the other oils, might lead us to suppose that its superiority might thus be explained; but the inadequacy of such an explanation becomes obvious, when we further pursue the inquiry, and observe a close correspondence in elementary composition between olive oil, which may be regarded, when introduced into the stomach, as medically, almost inert, and cocoa-nut oil, which is fairly comparable in efficacy with the oil obtained from the cod.

I have elsewhere supplied evidence, that the oils which I have chiefly employed evidently modify the condition of the blood. It is perhaps in this way that they accomplish more in correcting the morbid element on which phthis depends, at whatever period administered, than any other remedy with which we are at present conversant. Can they be advantageously introduced by friction? For the last six years I have frequently adopted this plan, sometimes as a substitute, at other times as a supplement to the internal administration of the remedy, and often with excellent effects. In the first patient with whom I adopted this plan six years since, who was affected with vomica and exhausted by diarrhœa, the principal treatment consisted in rubbing in an ounce of the oil flavored with lavender night and morning. He was restored to average health, and some years afterward died of another disease. It is very rare that any measure of real value proves absolutely novel. I had till lately overlooked the fact that Aretæus, Cœlius Aurelianus and Celsus, all speak of inunction with oil in phthisis.

Even neat's-foot oil at the commencement of this century was used by a quack named Samuel Braunston of Shuckburgh, in Warwickshire, for the cure of every disease, and cocoa-nut paste is used in the East for fattening poultry, although as far as I am aware, its medical efficacy was hitherto unknown. I cannot believe, however, that the oil acts exclusively in the way of supplying nutriment, since on the use of a quarter of a pint a week a patient will often gain one or two pounds in weight. It seems to modify the condition of the granules which enrich the blood, and to dispose them to the calm progression of change by which they are made to contribute to the production of healthy structure. I have seen an ulcer with a surface of deficient granulations brought speedily into a healthy healing condition by the daily application of a drop or two of cod-liver oil. Let a few granules be brought into healthy action, and the mass of granules seem to adapt themselves to the law of improvement. The part of the ulcer not directly in contact with the oil is still modified by its influence, and I have sometimes been induced to suppose that something analogous to the contagiousness of action (to use an expression of Liebig, as applied to some chemical phenomena), must be concerned in such results. Let me mention, as an instance of this action, that nitric acid will not readily influence platinum ; but if this metal be mixed with silver, the action which is immediately induced by the acid on the latter, is soon extended to the platinum.

It is a popular, and probably correct, opinion amongst whale-voyagers, that their expeditions are a cure for consumption. The quantity of oil under such circumstances drunk and introduced by the skin may contribute to a result which indeed may be further promoted by their active exercise and exposure to the air. In some hunting countries great efficacy is attached to drinking the blood from the jugular vein of a young doe. In both these instances collateral circumstances must be included in the consideration, and the same remark will apply to the experience of various observers, adduced by Dr. Simpson, of the comparative immunity from scrofula and phthisis enjoyed by those who work at certain manufactories, where oil, being largely employed, is believed to be introduced into the system of the work-people through the lungs and the skin; but the statement is well deserving of careful and extensive investigation. Neat's-foot and cocoa oil answer well endermically, and are not offensive. In conducting a course of oil treatment we must not assume that the oil can be indiscriminately used without regard to the condition of the system, and more especially of the mucous membrane. If a state of erethism exists, the preliminary administration of salines and prussic acid will often be desirable. Since the introduction of cod-liver oil, consumption has certainly been divested of many trying incidents; the progress of the disease is often long delayed, and the final sinking stage abridged. Often the final termination is ushered in by a sudden attack of congestion. I am inclined to think that this condition might occasionally be obviated, and that when the pulse has been for some time gaining strength, and the patient's weight increasing, the oil should occasionally be suspended, aperients administered, and, should any sensation of thoracic oppression be experienced, cupping-glassed applied. Such measures, when well-timed, rather promote than counteract the appropriate effects of the oil.

Let us not forget that the class of remedies we are considering has no exclusive adaptation to consumptive disease, but probably produces its good effects by correcting a condition which, in some degree, appertains to other disorders— for example, to anæmia in its various forms, whether associated with neuralgia, hypochondria, or hysteria, and, above all, that it is particularly suited for children of scrofulous constitution.

If hereditary tendency to phthisis exists in any family, it is surely of great importance to anticipate the pulmonary era, and introduce oleaginous medicines at an early period. The practice of daily inunction with preparations of neat's-foot or cocoa oleine might, I conceive, prove of peculiar efficacy. Were there time I might be tempted to dwell on this subject as affording a practical illustration of a position with which I began my first lecture, viz: that special observation is chiefly useful by conducting us securely to general laws. In the knowledge of laws dwells practical power and prophetic aptitude. It is by cautious experiment and scientific method we may hope to dissipate the mists of theory, and attain to discoveries sought in vain by the blind and guileless industry of former days.

In conclusion, gentlemen, allow me to say that your courteous attention to the lectures which I have had the honor to deliver will be a subject of grateful recollection in my future career. A motive to continued exertion is supplied by the example and sympathy of so many eminent members of this Society, thus willing to leave the attractions of domestic repose or of profitable engagements, in order to promote the association of scientific research with practical usefulness. It is a privilege to be incorporated with such a fraternity, since men whose minds are habitually exercised for the public good are amongst the greatest boons that Providence has given to the world.—*London Lancet.*

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Child-bed Fevers, in a Series of Letters. By C. D. Meigs, Philadelphia: Blanchard & Lea, 1854. (For sale by Riley & Co.)

It is strange that one so well acquainted, as is the author before us, with the nomenclature of diseases connected with the puerperal state, should make a selection of a name so general in its meaning that it scarcely has any signification at all. This, however, is in keeping with many other things that obtain in this book, as any one may satisfy himself who will be at the trouble to give it a perusal.

The style of the author, as seen in his work on Midwifery, and the one denominated Diseases of Women, &c., is preserved in the volume before us, with no small degree of care. Conscious of its character, he, in several places, alludes to it. He says: "I never made any pretensions to *writing-skill.*" "Words jump into my mouth when I want to speak them, or drop from my pen when I would indite them." [Fortunate man!] Still, he thinks, "no person can write well unless he write deliberately and with constant attention to the manner of his writing." So far, then, as the style of the author is concerned, it is unnecessary for any one to attempt a criticism. He criticises it himself, and thus takes the wind out of the sails of all those who find enjoyment in this kind of labor. But critics are not always satisfied in finding their labors thus superseded—and notwithstanding an author may attempt to take shelter under an "open confession," his faults, they think, should not only be considered as being none the less, but should be regarded as rather multiplied. The author knows his faults, and some persons would infer from that circumstance alone his ability to remedy them, and appear in the commonwealth of letters, in the garb of chastity and common dignity. Desirous, however, of notoriety, and conscious of incapacity to excel as others have done, by a plain statement of the truths contributed to the common stock, he invokes the aid of what little *ad captandum vulgus* can be manufactured over a loose, rickety method of discussing scientific subjects—rather a poor foundation to rest anything upon.

Throughout the work the author shows great research. Scarcely is there a book, ancient or modern, touching in any way the subject under consideration, but what has been eviscerated. This added to his own experience makes the *matter* of which the work is composed very abundant. Of the character of this matter much might be said. Plainly, very plainly, the doctrine is stated, that the disease is not *a fever, but an inflamation of the pelvic or abdominal viscera;* that indeed it is nothing more than an endo-metritis, a uterine phlebitis, an ovaritis or a peritonitis,—or two, or more of the local phlegmasiæ united.

To this doctrine the author seems much attached; and he sweeps away with a bold hand every fact or argument, it matters not by whom brought forward, that stands in his way.

This doctrine would have done very well for a period a quarter of of a century since, although even then facts enough had accumulated against it to inspire strong doubts of its correctness. It had its origin in the notion that all diseases essentially involve a lesion of structure, and is but a mere fragment of the exploded system advanced with so much zeal and ability by Broussais.

The truth is, Dr. Meigs, notwithstanding the learning he evinces, overlooks entirely the fact that many of the alterations of structure, such as occur in metritis, ovaritis, periotnitis, &c., revealed by the scalpel, are not themselves the disease, but merely its results—the tracks its has left on the organism. The progress made in every department of the inquiry connected with fever seems to warrant the doctrine that some fevers are *idiopathic,* involving a general disturbance of the vital functions, and depending for their existence upon the introduction into the system of an agent that works changes in the fluids as well as solids of every portion of the body. For the want of something more definite it is the fashion now to express these changes by the term zymosis.

That puerperal fever is very frequently of the idiopathic or zymotic kind, depending for its existence upon the introduction into the system of poisonous substances of various kinds, seems to be pretty evident from the fact, that the disease, although, in a certain sense, a unit, owes its origin to a variety of circumstances, and occasionally prevails as an epidemic. A few years ago we had epidemic erysipelas in the Western States. In the Miami Valley, where we were practicing at the time, it was noticed that females, both before and after confinement, to attacks of the disease, were very much predisposed. As a general rule the attacks were more frequent after parturition than before. In many instances the disease commenced within twelve hours after confinement. The character of it in some neighborhoods was very malignant. One physician, practicing in a village, delivered four women in the same week, every one of whom contracted the complaint and died. Death occurred in many cases within forty-eight hours after the first feelings of indisposition. Erysipelatous eruptions about the genital organs were present in a few instances; in the great majority nothing of the kind was observed. The *grade* of the fever, if allowed to judge from the effects of medicine, was not high. A very frequent pulse made its appearance early, with an inclination to still greater frequency, and also to diminution in volume and force. Prostration, indeed, seemed to be the ruling and unvarying tendency. In some of the cases undoubted evidence of pelvic and abdominal inflammation was present—in others there were no signs of any such condition—a fever, and nothing but a fever seemed to constitute the sum of the morbid phenomena. What now was the pathology of this epidemic—not what was its morbid anatomy? Did it consist of an inflammation merely, or was it a disturbance of the vital functions from the introduction into the blood of a poison, contained, as there was every reason to believe, in the atmosphere of certain localities?—or was it the result of erysipelatous poison introduced into the abraded genitals by the physicians in attendance? The course of the disease was too rapid and its mortality too great to be accounted for by any of the phlegmasia. Inflammation, in whatever tissue it occurs, has a certain cycle of changes through which it passes that requires considerable time.

This feature does not agree with the terrible disease we have been considering. A few hours, in many instances, was sufficient to seal the doom of a mother after giving birth to her child. Literally the functions of the organism appeared to be overpowered by the impress of the virus. *Post mortem* inspection in some cases revealed peritonites; others showed no lesions that explained the uncommon malignity.

The records of medicine abound with a form of disease denominated uterine phlebitis, the result of poisonous matter introduced into the vagina and uterus of parturient females. For a long period this form was very rife in many of the hospitals of Europe, and it was ascertained that it was due to cadaveric matter communicated by medical men and students, who had previously been handling *post mortem* specimens.

From the instances of origin to which we have referred, and we might have alluded to many more, it is hardly probable that puerperal fever can always have the same pathology, unless it can be proven that a snake-bite and malaria would give rise to identical lesions.

Instead, therefore, of there being anything like unity in the lesion of puerperal fever, as contended for by the author, there is great diversity, due to the peculiar character of the causes concerned in its production.

As might have been expected from the author's views of the pathology of puerperal fever, the *treatment* is confined almost entirely to *blood*-letting. He remarks:

"At the age of sixty-two years, and after a life in which my medical studies, commencing in 1809, and a copious clinical experience, and no little reading of authors, have continued until the present day, I am become immovably fixed in the conviction, that for the cure of child-bed fever blood-letting is the chief, not to say *sole reliable remedy.* I go further, and say that the dreadful mortality that marks the epidemic form is discreditable to our class; and I say this founding it upon the inexcusable truth, that the disease is always a phlegmasia, and that it has a stage during which the application of the proper remedy is possible, and that only a lack of proper vigilance, or a lack of perception and judgment, too often allows that evanescent stage to be over and passed, while we, alas! doubt and hesitate, and at length judge wrongly of the duty."

The above paragraph is interesting on several accounts. Very true it is that the remedy proposed is in accordance with what might have been expected of any one who knew the author's views of the pathology. It seems, however, strange that although regarding the disease in question as being a phlegmasia, he should see *no other* remedy for it but the lancet. All know that inflammation is engrafted on very opposite conditions of the system. We have it occuring in a full habit of body, and also in the prostration connected with wasting diseases and anemia. No one in his senses, therefore, would regard the same remedy as being applicable to these opposite states of the system. The loss of blood where there is already a deficiency, not only seems reckless, but, unless the whole profession, at the present time are in a state of ignorance, it would be ruinous. Deficiency in quantity, and want of proportion in the elements of this fluid, are indeed among the prime causes of the hyperemia, congestion or inflammation which so frequently spring up in the course of certain diseases. The effect of the remedy, under such circumstances, would be to increase trouble rather than abate it.

In cases of a purely sthenic character there might be some pro· propriety in the remedy, But even here more than half of the profession would trust to other means. Opium, opium and antimony, and other drugs of similar properties have been found lately to accomplish results as valuable as those that have been attributed to blood-letting.

The "evanescent stage" of which the author speaks as being the proper period for his favorite remedy, the one in which it will never fail to meet the most sanguine expectations of the practitioner, has no foundation except in the annals of a stale tradition.

The author does not stop merely with the recommendation of blood-letting as *the* remedy in child-bed fever, but he volunteers to say that the mortality which marks the epidemic form is due to the stupidity and effiminacy of the profession in not recognizing it at once as a phlegmasia, and treating it accordingly. Emanating from a novice in the profession such language would be excusable--sensible men, who had practiced much in the complaint, would set him down as an ignoramus, and there the matter would end ; but for a man sixty-two years of age, who has had "extensive opportunities for observation in hospital and private practice" to make such assertions, is so far beyond comprehension that nothing short of a reference to decrepitude of mind and obfuscation of thought, connected with declining years, seem adequate to explain.

In concluding our notice of this book we are compelled to say that it falls very short of the author's reputation. He has been regarded as being up to the times in everything pertaining to his department. The book is not less than fifty years behind the times. It was right for Dewees to advance such doctrine—certainly for no one since;

Prepared for, and addressed to the young men of the profession, and written in rather a familiar kind of style, the tendency of this book must be the very reverse of what, we have every reason to believe the author intended.

A Manual of Pathological Anatomy. By C. Handfield Jones, M.B., F.R.S., and Edmund H. Sieveking, M.D., Fellow of the Royal College of Physicians, &c., &c. First American Edition, Revised, with 397 Illustrations. Philadelphia: Blanchard & Lea. 1854. Pp. 733. (For sale by Riley & Co.)

Certainly, some would say, we already have works enough on Pathological Anatomy. This, however, would be premature, for the science is of comparatively recent origin, and owing to its vastness and the difficulties connected with its investigation, there is still room for a score of men to make reputations as brilliant and imperishable as those of Laennaec, Haller and Hunter. All that we have on the subject, although very creditable to the authors who have acted the part of pioneers in the inquiry, seems to show, among other things, the domain there is yet to explore. Besides, much of what has been investigated, by the laborers who have been in the field, lays scattered through Monographs and Journals, in a form inaccessible to the great body of the profession. To lay before their professional brethren, all that is known in Pathological Anatomy, that is, in every department of it, seems to be the leading design of the authors. They say they have sought "to place before the reader a summary of ascertained facts, together with the opinions of the most eminent pathologists of this and other countries." As far as possible they have regarded it as their duty to select the best fruits from the harvests gathered by other laborers; and it would not be far from correct to regard the authors of the work as being very successful in getting up a very complete manual of what is known on the subject. The arrangement of the several points of inquiry is, first, "General Observations," "Morbid states of the Blood," "Textural Changes," "New Formations," Tumors. The remaining thirty-eight chapters are devoted to an examination of the various abnormal states developed by disease in the venous system, in the circulatory, respiratory, digestive, urinary, and generative organs, in the joints and in the opeous system.

The elucidation of these subjects is preceded with some very judicious remarks of a general character. The author says:

"The term Morbid Anatomy hardly needs explanation; as ordinary anatomy implies the study of and acquaintance with the healthy structure, so morbid anatomy implies the same of diseased structure. The meaning of *Pathology*, must be clearly conceived by considering that of its twin-sister, Physiology, as the latter imports the knowledge of the natural actions; so does the former that of the unnatural diseased organs. Physiology has her vital stimuli; Pathology her stimuli or excitants to unhealthy life. This brings us to notice a point that has been excellently illustrated by Prof. Simon. He remarks that many unnatural or diseased conditions are not really unnatural in themselves, but are the proper and necessary consequences of some cause or influence which has acted on a healthy body. The state of the skin which a severe burn produces is, certainly, very unnatural and diseased, but the inflammatory and exudative processes which have produced it are quite natural under the circumstances that have occurred; they are the proper reaction of a healthy organism to the unnatural stimulus of extreme heat, and are called forth in the same way as is the healthy flow of blood into a chilled part by the action of a kindly warmth. So in a case of variola, the skin, covered all over with unsightly pustules, is in a very unnatural state; but it is not the eruption, nor the constitutional disturbance that is really unnatural, but the presence of a certain quantity of infectious matter in the blood, which, acting on a perfectly natural system, thus calls forth its expulsive efforts.

"If we slightly alter this perfectly natural state, as by premising vaccination, then the introduction of the variolous poison no longer produces the same morbid effects, and we say the system is protected. The fact is, the system is changed from its originally perfectly natural condition, and will no longer respond to the natural stimulus.

"We find, it may be, a portion of the brain so soft as to resemble cream, quite broken up and disorganized; but, we look further and find that the artery supplying it with blood has been plugged up or tied, and we then see that the locus of the disease was not really in the brain but in the artery; it would have been abnormal had the brain, deprived of its supply of blood, retained its natural texture. Or, again, we see a person suffering from violent epileptic convulsions; but he passes a large worm from his bowels, and the attacks cease; in case of this individual the convulsions were the natural expression of the unnatural irritation to which the brain was subjected.

Many like instances might be mentioned, and they certainly show that disease is very often not to be regarded as a special entity of a peculiar strange kind, but as the natural result of the endowments and qualities belonging to our bodily organs when those organs are acted on by certain unnatural stimuli.

Hence we can better understand that many diseases have a regular and normal course made up, so to speak, of a succession of necessary results, which, however, is liable to be disturbed by various extrinsic causes.

For instance, a person has ague, the paroxysms occurring in regular succession; he takes quinine, and they diminish and disappear, the course of the morbid action is interfered with and broken. Or, a child has whooping-cough, and the disease is proceeding in its usual course, but in consequence of exposure to cold, he is attacked with inflammation of the lungs, and paroxysms characteristic of the disease are, to a great degree interrupted, the whoop-cough is merged into pneumonia. Or, again, a person has tubercular deposit in his lungs; the natural tendency of this is to soften, break down, and be expectorated together with the involved tissue, while, as fresh deposits, more and more of the organ is destroyed; but before this can happen inflammation is set up to such an extent in surrounding tissue that life is cut short, not by the effects of the tubercular destruction directly, but by the intercurrent inflammation."

Chapter II. relates to the morbid states of the Blood. On this subject the author well remarks:

"It is manifest that an acquaintance with the healthy properties and morbid alterations of the blood is absolutely essential to a correct study of the phenomena wrought by disease in the solid parts. But the blood itself is a very compound thing, not only as regards the number of different natures it contains, organic and inorganic, not only as regards the manifold additions that it receives from without in the way of nutriment, and those which are poured back into it as the effete residues of tissues, but also as regards its own morphological condition, being made up of solid and fluid parts, of organized particles floating in an organized liquid. In diseased states of the blood these several parts, or some of their constituents, may be separately affected, and it seems, therefore, desirable, on this account as well as for the sake of greater precision, first to examine the individual component elements of the fluids with reference to their pathological changes, and afterwards to show the diseases of the blood taken as a whole."

In preparing the material for this work, the microscope, as well as the scalpel, has been freely used; as a consequence the scope is much more extensive than that which obtains in the well known works now in the hands of the profession.

An Inquiry into the Pathological Importance of Ulceration of the Os Uteri, being the Avonian Lectures for the year 1854. By CHARLES WEST, M.D., Fellow of the Royal College of Physicians, &c., &c. Philadelphia: Blanchard & Lea. (For sale by Riley & Co.)

The use of the speculum and the labors of those who have devoted themselves to the department of Uterine pathology, have done much to increase our knowledge of the morbid conditions of the Uterus. Yet, this good has also been mixed with some alloy, for so much dispute has been raised about various points in this relation, such strong asseverations, with equally strong contradictions, have been made, that much unnecessary obscurity has been thrown around points apparently simple in themselves, and capable of being elucidated. This is especially true of that point in Uterine pathology of which Dr. West treats. Some have denied its existence, or, admitting its occasional presence, assert that it is of trivial importance, while, on the other hand, another class make it the origin of all the evils to which women are subject, and assert that from 70 to 80 of every 100 cases of Uterine disorder is consequent upon ulceration of Os Uteri as a primary and palpable lesion. Thus, on this simple point, sides have been taken, and the premises debated with an acrimony which should at any rate be foreign to scientific discussion, however characteristic of partizan warfare. To those largely engaged in the treatment of these diseases, the influence of this state of things, though much to be deprecated, is not so pernicious as to the mere general practitioners who, meeting with fewer such cases, must depend mainly for their knowledge of the subject, upon the authors whose works chanced in their way, because large clinical opportunities will enable the former to correct many, if not most of the partial or exaggerated statements promulgated by either class of partizans, provided they possess (which some, it must be confessed, do not) the power of seeing and judging for themselves. It is satisfactory, therefore, to meet on such a subject a work which, like that before us, discusses the matter in a fair, calm, and dispassionate manner, conveyed in a pleasing style by one who evinces an adequate knowledge of pathology in general, and especially of Uterine Pathology. We may not always subscribe to the conclusions he arrives at, but then his data are fairly given by which to correct or confirm them, and there is a candor, an aspect of seeking the truth rather than the victory, visible throughout the work, exceedingly pleasing. Science has much to gain, and nothing to lose, when investigations are carried on in such a spirit, and none can peruse such a book without gaining some benefit from its teachings. These we shall now glance at as concisely as may be consistent, by setting before our readers Dr. West's views, and some few remarks which seem appropriate to them. The question examined by Dr. West is the following:

"Whether ulceration of the Os Uteri is to be regarded as the first in a train of processes which are the direct or indirect occasion of by far the greater number of the ailments of the generative system; or, whether, on the other hand, it is to be considered as a condition of slight pathological importance, and of small semerological value—a casual concomitant, perhaps, of many disorders of the womb, but of itself giving rise to few symptoms, and rarely called for special treatment.

This proposition is argued under four aspects, viz:

1. How far either of these views is supported by what we know of the anatomy and physiology of the Uterus in a healthy condition. The facts mentioned are no doubt true, and the reasoning on them able, but we must pass over them as quite irrelevant, for probabilities are nothing in medical inquiries, when facts and experiments can be procured, and this our author seems elsewhere disposed to admit.

2. Whether post mortem examinations show this disease to be frequent, or the reverse, and with what other other diseases is it combined? Dr. West, in this connection, gives the result of 62 females examined by him in reference to this point, who, during life, had not complained of Uterine diseases. Of the 62, the uterus was healthy in 33, and diseased in 39. Of these last, ulceration existed in 11. The existence of other diseased conditions was by no means constant. He therefore infers that in by far the majority of cases, the ulceration when present was not merely trifling in extent, but

that it had not given rise to so much irritation of the neighboring tissues, as to produce any appreciable congestion of the mucous membrane in its vicinity; while the changes in the uterine substance alleged to depend upon it were oftener present without than in connection with it, and, moreover, none of the ulcerations of the os and cervix of the womb were so considerable as those which were apparent in its cavity. We must be careful, however, lest we carry this deduction too far. In a given number of cases of unsuspected pulmonary difficulties an autopsy may reveal, and often does, so many remains of old pleuritic adhesion in those of whom, in life, pleurisy had never been suspected. Yet, we meet cases in life without any greater apparent extent of that disease, presenting grave symptoms which we cannot deny, to be consequent upon the pleurisy existing, because of those in which no such symptoms accompanied the same extent of lesion. Neither can we assent, on the same grounds, that such attacks are of no serious importance to the patient himself. We must also be exceedingly careful in making deductions from the cadaveric appearances in such lesions, which depend much for their characteristic appearance during life upon the amount of engorgement, color, and other characters so easily destroyed by post mortem changes.

3. Dr. West arrives at the same conclusion from the observation of ulcerations occurring in the procident womb. This, however, as he fairly admits, is subject to the great drawback in that, the gradual displacement of the organ, to such an extent, must blunt its sensibilities, and render it insensible to injuries which otherwise might produce disorder of its functions and alterations of its structures.

4. What does clinical experience teach of this disease? And this is the important stand-point from which to decide the whole question.

Dr. West details the results of the examination of 40 prostitutes admitted for venereal diseases to the Hospital. In 27, os and cervix uteri were healthy; in 10, slight ulceration, or rather excoriation existed, with no other change of tissue; in three cases the abrasion was more extensive, surrounding the os for one-third of an inch. In one of these, slight hypertrophy was present, but no induration in any case. So that, whatever else may cause the ulceration, induration, and hypertrophy of the uterus, excessive sexual indulgence does not predispose to them.

In 628 cases of uterine disease, 125, or about one-half had ulceration of the os. It was absent in the rest. The coëxistence of symptoms and other diseases of these and other cases, as given in many elaborate tables, which our space will not allow us to quote, but which we commend to the consideration of the reader. Their results may be set down thus :

—That uterine pain, disturbance of the menstrual functions and leucorrhea, are not dependent upon ulceration, being found as often in its absence as presence.

—That ulceration of the os uteri does not seem to exert any special influence either in causing sterility or inducing abortion.

—That all the evils mentioned, though not the necessary sequences of ulceration of the Os are intensified by its presence.

—That appreciable changes of the Uterus, such as misplacement, enlargement, and hardening of the tissues were found separately or coëxisting in four-fifths of the cases examined, with or without ulceration of the Os, but that an indurated and hypertrophied state of the Uterus existed more frequently with ulceration.

This is not necessarily cause and effect, as the Os was sometimes quite healthy in an indurated and hypertrophied Uterus, and such conditions were found in slight ulcerations, and sometimes were absent in extensive ulcerations of the Os. From which Dr. West arrives at the conclusion that ulceration is not the " general cause of the symptoms which have been attributed to it, or even as a general concomitant of them, or index of their degree and severity."

This line of argument occupies the first two Lectures ; the third is devoted to a general consideration of the causes of these symptoms which are regarded by others as dependent on ulceration of the Os Uteri, and their treatment. He takes strong ground against the indiscriminate use of caustics in the local treatment, and very properly, but perhaps leaves an impression against their use at all, which we think is hardly intended, or if so, may be an error on the other extreme. That the indiscriminate cauterizement of the surfaces of the Uterus in almost all its diseases, is a flagrant abuse, cannot be doubted, but in warning others against this extreme, we must not forget that it is equally true, that properly resorted to, they form most useful, if not indispensable auxiliaries in the treatment of some forms of uterine ailment. Lest our readers, however, should think we defend caustics too much, we subjoin the following extract, which contains most excellent reflections for those who treat this or any other form of female ailments: "I think it should be borne in mind that in connection with this mode of treatment, various other measures are of necessity adopted, eminently calculated to relieve many of the slighter forms of Uterine ailment. The married woman is for a time taken from her husband's bed; the severe exertion to which either a sense of duty urged, or a love of pleasure prompted her, is discontinued; while rest in the recumbent posture places the uterus and the pelvic viscera in just that position in which the return of blood from them encounters the smallest difficulties. The condition of the bowels, probably before habitually neglected, is now carefully regulated, and the patient's diet, bland, nutritious, and unstimulating, often differs widely from that which, while all her functions were overtaxed, she vainly strove to tempt her failing appetite. Add to this that the occurrence of the menstrual period is carefully watched for, and that all precautions are then redoubled, and each symptom of disorder, such as on former occasions had been borne uncomplainingly, though often not without much suffering, is at once encountered by its appropriate remedy, . . . and we have assembled just those conditions best fitted to remove three out of four of the disorders to which the sexual system of woman is subject. But the very simplicity of these measures is a bar to their adoption, for you will bear me out in saying that the rules which common sense cannot but approve, but which seem to require nothing more than common sense to suggest them, are just those to which our patients least readily submit. The case is altered, however, when these same rules are laid down not as the means of cure themselves, but only as conditions indispensable to the success of that cauterization which, repeated once or oftener in the week, is the great remedy for the ulceration that the doctor has discovered, and which he assures his patient, and with the most perfect good faith, produces all the symptoms from which she suffers.

R. G.

The Principal Forms of the Skeleton and of the Teeth. By Prof. R. OWEN, F.R.S., &c. Philadelphia: BLANCHARD & LEA. (For sale by RILEY & Co.)

Not long since this work made its appearance in London as a portion of a series entitled "ORR'S CIRCLE OF THE SCIENCES." Supposing that a treatise of so much value was worthy of a separate position and a more permanent form, the publishers have given to the public a neat littlĕ volume, containing, including the 'Glossary,' 329 pages.

To those acquainted with the literature of Zöology, Comparative Anatomy, and Geology, it is unnecessary to say that Prof. Owen, the author, is not less distinguisded for the originality of his investigations, than the soundness of his opinions and the chaste manner in which they are expressed. His views on "Odentography," "Comparative Anatomy," "The Archetype Skeleton," "The nature of Limbs," and "History of British Fossil Mammalia," have given him a position among Naturalists that makes every thing that emanates from his pen interesting.

The nomenclature employed in this little work may deter some from its study. This should not be the case. "*Alisphenoid*" and "*Neurapophysis*" are no harder to remember than many of the terms cannonized by the zoologists of the day. Ideas must be expressed by their appropriate signs; and without learning and understanding the technical terms of a science that science can not be comprehended. No sophism is more transparent than the one used against what are called the "hard words" of Natural History, in its different departments. Where such words are invented and adopted by the masters in science, their acquisition and retention by the student will be found to be the surest and most available steps of progress.

From the work before us we should like to make a number of extracts, but our space in the present number of the Journal will not permit it. The following, however, we insert as some of the concluding remarks on the skeleton.

"A retrospect of the varied forms and propertions of the skeletons of animals, whether modified for aquatic, aerial or terrestrial life, will show that while they were perfectly and beautifully adapted to the sphere of life and exigencies of the species, they adhered with remarkable consistency to that general pattern, or *archetype*, which was first manifested on this planet, as Geology teaches, *in the class of Fishes;* and which has not been departed from, even in the most extremely modified skeleton of the last and highest form which Creative Wisdom has been pleased to place on this earth."

From this archetype skeleton, found in fishes, the author ingeniously, and, to our minds, philosophically, traces out each element of the bony frame work, as it obtains, or not, in the diversified skeletons of the great classes of the animal kingdom.

Buffon, on this subject, remarks: "It is only by comparing that we can judge, and our knowledge turns entirely on the relations that things bear to those that resemble them, and to those which differ from them; so if there were no animals *the nature* of man would be far more incomprehensible than it is.

"And if this be true in regard to man's general nature it is equally true with regard to his anatomical structure."

In the same way our philosophical poet felt when he said:

> ——————'Tis the sublime of man—
> Our noon-tide majesty—to know ourselves:
> Part and parcel of a wondrous whole.—COLERIDGE.

Cordially we recommend this little volume to every one who has any taste for things pertaining to an enlightened view of Osteology, the alphabet of Zoology.

A Popular Treatise on the Skin and Hair. By ERASMUS WILSON, F.R.S. Second American, from the Fourth London Edition. Philadelphia: BLANCHARD & LEA. 1854. (For sale by RILEY & Co.)

The design of this work is to supply a knowledge of that part of the economy of man which forms the exterior of his body and is more immediately under his control, namely, the Skin, Nails and Hair; and, also, to suggest the means necessary to the care and protection of these important parts.

Replete with interest, these subjects should command the attention of every one who designs to pass through life with all the exemption possible from disease.

As a preventive of disease nothing, perhaps, contributes more than proper attention to the cuticle portion of the frame, the seat of eliminations, that, unless properly regulated, must lay the foundation of much trouble and suffering. All the instructions put forth in regard to the prevention of cholera and other epidemic diseases, abound in suggestions relative to the necessity of keeping the skin in a Physiological condition.

One of the leading distinctions between the people of savage and civilized life is the neglect of the former in their attentions to the skin, leaving it for weeks without the use of detergents of any kind, and often imperfectly protected from changes of temperature. On the contrary, as civilization progresses, we find not only increasing attentions to cleanliness of the skin, suitable coverings for it in the different seasons, but the institution of public baths and wash houses, and an eagerness manifested to seek out these places by the rich and poor, which gives evidence that they are appreciated. The first public institution of the kind to which allusion has just been made, was established in Liverpool, in 1843, and met with so much encouragement as to attract great attention in most of the manufacturing towns in England, where they are now not regarded merely in the light of a luxury, but as a public necessity—something that increases the enjoyments of the people and lessens the annual bills of mortality.

To those who have paid some attention to the anatomy and physiology of the skin, the perusal of this little treatise, emanating, as it does, from one of the the most successful cultivators of Dermatology, will be a work of much pleasure. Besides, the work is sufficiently popular to go into the hands of the people, and to become a hand-book in our schools for the education of the rising generation.

A Dictionary of Medical Terminology, Dental Surgery, and the Collateral Sciences. By Chapin A. Harris, M.D., D.D.S., Prof. of the Principles of Dental Surgery in the Baltimore College, Member of the American Medical Association; Member of Medico-Chirurgical Faculty of Maryland; Author of the Principles and Practice of Dental Surgery, &c., &c. Second Edition. Philadelphia: Lindsay & Blakinston. 1855. 8vo. pp. 800. (For sale at the Odeon Book Store, by S. H. Burr & Co.)

Dictionaries, as well as every thing else in the annals of bibliography, are being multiplied to suit the increasing demands of society. The above work has been compiled by the author for the student and practitioner of Dentistry. The volume before us is one of the second edition, and in it the author has introduced not only the words and phrases purposely omitted in the *first,* but also those that have been subsequently added to the literature of all the various departments of Medicine and the Collateral Sciences. Reflection convinced the author that an extended view of the subject was necessary, since the scope of professional education for the Dentist has become so widened that general Medical and Collateral Science are now, to a considerable extent, embraced in the curriculum of Dental study.

In looking through the work, we are impressed with the belief that the author has performed his laborious task in a manner creditable to himself as a man of science and industry. The definitions of words and phrases, their etymology, orthography, orthoepy, etc., are of a a character that will command respect in the commonwealth of letters.

In its present form the work may be regarded as a Dictionary of *Medical* as well as of Dental Science.

Positive Medical Agents; being a Treatise on the new Alkaloid, Resinoid, and Concentrated Preparations of Indigenous and Foreign Medical Plants. By authority of the American Chemical Institute. New York: B. Keith & Co., Proprietors and Publishers, 582 Houston street. 1854. 8vo. pp. 300.

This is a work designed to elucidate a certain department of our Materia Medica—the Alkaloid, Resincid, and Concentrated preparations of indigenous and foreign medical plants. Although it appears in the *form* of a treatise, and is, to some extent, of this character, it also is entitled to the character of a kind of advertisement of the drugs, &c., prepared by the American Chemical Institute.

The first Part is occupied with general considerations, in which are embraced a number of topics such as "Object of the work;" "Benevolent Character of the Physician's Mission;" "The profession progressive enough to adopt truth;" "General considerations on the value of Positive Agents;" "Facts which have been overlooked by manufactories;" "Advantages of concentrated agents;" The action of medicines," &c.

Part Second is devoted to the "Concentrated Preparations," and *Part Third,* to "Clinical Reports." The latter head appears rather awkward in a book on drugs. The author, however avows that it has been introduced to show the results which have followed the use of Concentrated medicines.

Nature in Diseases, illustrated in various Discourses and Essays; to which are added Miscellaneous Writings, chiefly on Medical subjects: By Jacob Bigelow, M. D., Physician and Lecturer on Clinical Medicine in Massachusetts General Hospital, Professor of Materia Medica in Harvard University, etc., etc. Boston: Ticknor & Fields, 1855; pp. 391. For sale by Riley & Co.

Nearly twenty years ago the author of this volume delivered before the Massachusetts Medical Society at their annual meeting a discourse on "Self-limited Diseases," which may be regarded as the foundation of this a more extended effort on the same subject.

That certain diseases are self-limited, has been always known, but the fact has not always had the currency it deserved at the hands of medical men. Placed upon the powers of this, that, or the other remedy or combinations of remedies, the minds of those engaged in practicing the profession have too often lost sight of the habitudes of disease; and, instead of watching, guarding, and, in many instances trusting to the salutary movements of the *vis medicatrix naturæ,* modes of procedure have been authorized utterly incompatable with an enlightened course of medication.

Our appreciation of the list of "self-limited diseases" has been on the increase for some time, and in this respect the papers of Dr. Bigelow may be regarded as a valuable contribution. Hippocrates taught the doctrine of "Critical Days" in fever; and since his time every close observer, unless warped by the influences of some particular theory or system, has seen enough to make him believe that the views of the sage of Cos were not without foundation. This tendency of fever to terminate, after running through one, two or more hebdomadal periods, when properly treated, leads to very valuable results. It prepares the mind of the practitioner to understand the phenomena as they are presented, and to attribute to each one the proper degree of importance. Typhoid fever, for example, has a certain cycle of changes through which it will invariably pass, and from which it cannot be moved by any interference, however vigorous. To understand this, is of as much value to the practitioner as any thing else connected with the pathological habitudes of the complaint. Without a knowledge of it, medication must be uncertain—perhaps destructive.

Among others, we commend this little book to the young men of the profession. They, especially, will find it a useful companion in their first efforts at relieving the sufferings of the race.

PART FOURTH.

EDITORIAL AND MISCELLANY.

LETTER FROM DR. C. C. SAMS.

HILLSBOROUGH, Ohio, Jan. 22, 1855.

DR. DAWSON—*Dear Sir:* Enclosed you will find $4, which you will please place to my credit for the Journal.

So much for business, and although you did not answer my last letter, I will add a word or two about the Journal. Without any disparagement to your predecessors, I may say with truth, that it gets better and better; or, at any rate, it suits my taste better. The particular character of the subject matters discussed having more interest for me than those formerly selected, may perhaps account for this. Be this as it may, I am much pleased with your industry and skill as an editor, and hope it may not be your lot to say that "*it don't pay.*"

The most important part of a medical journal to the country practitioner, who seldom enters a book-store, is that devoted to bibliographical notices. From these cursory sketches, his opinions of new books are formed. How important, then, that they should consist of something more than a mere commendatory notice, written as an equivalent for the book sent. A new book seldom comes out that contains anything original, either in matter or arrangement, which could not be briefly and accurately described in a page or two, if the editor had the disposition to do it. Many new books contain not more than one or two new ideas, and I hold it to be the duty of the editor so to write his notice of the work that there can be no mistake in regard to the book in the minds of his readers. In the Journal I think there is some improvement in this respect, and I think there is room for more.

I see that some of the medical speculators in the city of Gotham are making money by treating pulmonary complaints by inhalation. They claim it as a new method of curing consumption and its kindred diseases. How would it do for you to get up an article on the subject, giving a correct history of it, the philosophy of its *modus* *operandi*, and the various improvements that have been suggested in the use of medicated inhalations by modern practitioners. The subject is one that should be rescued from the grasp of empiricism, before it is too late.

Another subject of interest I would suggest, "The moderate use of alcoholic drinks as a prophylactic of Tubercle." In these days when "temperance mania" is so rife, it might be dangerous, but I think a very interesting article might be got up on the subject, without treading on the toes of the most intemperate temperance advocates.

Respectfully,

C. C. SAMS.

Remarks.—We insert the above letter from Dr. Sams, for several reasons. We are gratified to find that the Journal in matter and manner meets, to some extent, the approbation of the class to which he belongs. But this is not our only reason. The views expressed in regard to notices of books, the treatment of pulmonary complaints by inhalations, and the prophylactic powers of alcoholic stimulants in arresting a tubercular diathesis, are entitled to consideration.

To conduct correctly the bibliographical department of a journal, is no slight undertaking. The merits of an author, and the pecuniary outlay of his publisher, are the usual implied reasons why a new book should be favorably noticed. Of the validity of the former of these reasons, of course the conductor of a journal has a right to be the judge, and he may condemn or not, as he thinks proper. The exercise, however, of this faculty with reference to many of the publications now coming through the press, is by no means free from embarrassment. Taken upon the "*general count*," most of the new books, upon the score of utility, would have to be condemned. The principal amount of matter that enters into their composition, is not at all new, but on the contrary has been for years before the profession. Upon a "*special count*" the verdict would be different. There is scarcely a new book that appears on any of the departments of medical science, but what contains something that is really new. As all know, a work appeared a number of years since, on Urinary Deposits, by Prout, the father of that whole subject. Considered generally, that work was meritorious, because almost every thing contained in it was new and valuable. Of course it was right to give such a work a favorable reception. Lately a work has appeared on the same subject by Bird, in which there is scarcely any thing not to be found in former works, save and except the researches of the author on oxalate and oxalurate of lime, together with an improvement of the manner of investigating the whole subject. What, now, should be said of Bird's book? What else, indeed, could we say of it, than that it is a "contribution" to medical science? Hundreds of other new books sustain the same relation to the sciences, and on this account get currency among medical men. It would also be doing injustice to the authors to say that they are not works of utility—such as are demanded by the investigating proclivities of the age. There is another kind of book, such for example as that of "Meigs' on Child-bed Fevers," which not only contains nothing new that is pertinent to the subject discussed, but much, which, if credited and carried out in practice, would be injurious in its tendency. In regard to works of this class, the course of the Journalist is clear.

With respect to the treatment of pulmonary complaints by "*inhalalation*," we have but little experience. The plan, however, deserves more attention than it has generally received. Theoretically, there are good reasons in its favor; and practically, much information has accumulated that when rightly understood, is calculated to inspire confidence in this mode of administering drugs.

"Alcoholic drinks as a prophylactic of Tubercle," is worth investigating—indeed, I may say it has been considerably investigated, and that, too, by "temperance" men, who have been more than any others, upon the look-out in regard to the effects of alcohol upon the body in both health and disease. Cases have presented themselves all over the country, where individuals, with predisposition to tubercle, and some actually laboring under a tubercular diathesis, have recovered after taking to the daily use of alcoholic stimulants; and so closely related have been the recoveries from what seemed to be an impending fate, to the use of the stimulating drinks, that many have been induced to believe that the connection was that of cause and effect.

It might seem reasonable to suppose that we could be assisted in an inquiry of this kind by reference to our libraries; but in regard to it, they are exceedingly barren. Carpenter, who wrote "The London Prize Essay on the Use and Abuse of Alcoholic Liquors," an essay that it is supposed contains every thing bearing on the subject, is silent in reference to the matter before us. He thinks well of wine and other alcoholic drinks in typhus and typhoid fevers, and says that "the result of using wine in typhoid fever was, that the mortality was not above a third of that of the simple expectant treatment, the patients dying under the latter from actual exhaustion and failure of calorifying power—no lesion being detected on post-mortum examination." The epidemic to which he alludes, occurred in Edinburgh in the year 1836–7.

The value of wine and other stimulants in typhoid fever, appears, in the estimation of the distinguished Physiologist, to be due to the circumstance that such things maintain the digestive and assimilative functions, while the disease is running its course. "Day by day (he continues,) the fatty matter of the body is used up by the respiratory process, and thus, as in cases of simple starvation, the patient must die of *cold*, unless some means be provided for the sustenance of heat. In such a condition of the system, no farinaceous or oleaginous matters could be digested or absorbed in sufficient quantity ; whereas, alcohol is taken into the current of the circulation by simple endosmose, without any preparation whatever, and can be immediately applied to the production of heat."

So far as disturbance in the functions of digestion and assimilation are concerned, tubercle bears some analogy to typhoid fever. Both diseases are characterized by a predominance of waste over supply. Now, there is every reason to believe that articles which display good effects in the one class of cases, will do so also in the other.

This matter, however, needs more investigation, than it has yet received. Alcohol is a very available medicine, and the abuses which have obtained in regard to it, constitute no reason against its proper use.

For years we have advocated the doctrine that when taken as a beverage, alcohol acts as a slow poison—more destructive in its effects than arsenic, prussic acid, etc.; and for the same length of time we have contended for it as a medicine, and used it when we thought it proper in the treatment of disease.

MICHIGAN UNIVERSITY—HOMŒOPATHY.—From the political journals we learn that a bill has passed both houses of the Michigan Legislature, requiring the Board of Regents of the Michigan University, to establish a Chair of Homœopathy in that Institution.

This measure must place the present Medical Faculty in rather an unpleasant position. The gentlemen who compose it will either have to teach regular scientific medicine, side by side, with an individual engaged in teaching the most transparent humbug of this or any other age, or they must resign their connection with the Institution. As either course must necessarily destroy the school, it is to be hoped, and it will be expected, that the Faculty will take the latter, the only course by which the dignity of the profession can be preserved.

Michigan has had the reputation, so far as industry and moral worth are concerned, of being inhabited by a very good class of persons. Drawn largely from the New England States, the people of Michigan are mostly the offshoots of the literary institutions of that region—a region where public shools and colleges are proverbially abundant. From a population of this character, the members of the present Michigan Legislature have been selected. It would, too, be a reflection upon the people, to say, that they had not made a good selection—that is, such an one as secured the individuals most likely to carry out their wishes. The present law, therefore, establishing a Chair of Homœopathy in the University is, doubtless, in accordance with public opinion in the State.

After this, who is there that can look forward to the time when the school-master will banish humbuggery from the land ? The manner in which he at present unfolds, and the material with which he fills the human mind, constitute no barrier against the sophistry which obtains in reasoning upon the effects of drugs. Educated according to the approved plans of the day, our best scholars are found to be as easy a prey to quackery as the greatest ignoramus of the land. It is unnecessary to cite instances in confirmation of this statement. The patronage given by Professors in literary colleges, by clergymen, by lawyers, and by poets, to quackery of every phase, and particularly to the homœopathic variety, is notorious, and, what seems strange, is, that the support which these classes render to a given system of quackery, is in an inverse ratio to the amount of truth it contains. The nearer a perfect absurdity the thing is, the warmer their attachment to it. Of all the nonsense that has ever been invented, homœopathy takes the lead. Indeed, its strength lies in the obviousness of its inefficiency, and the transparent sophistry of its reasonings.

URINARY DEPOSITS.—We have received from the author, John King, M.D., of Cincinnati, Ohio, "A Table of Urinary Deposits, with their Microscopical and Chemical Tests, for Clinical Examination." This Table, giving, as it does, figures of the principal deposits, and of various extraneous matters found in the urine, will certainly prove itself to be a very valuable companion in the hand of those who take any interest in investigations of the kind. These deposits relate to a field of inquiry vast in extent, and difficult of explanation, and nothing like a general interest in regard to it has yet been awakened. A few individuals have pioneered the way, and have made discoveries that have given them world-wide reputation. These discoveries, however, relate more to the composition, normal and abnormal, of the urine, than to the *import* of matters, found in connection with the fluid. What are we to infer from the presence of albumen, from the presence of cystine, from the presence of oxalate of lime, and oxalurate of lime? or even from the presence of phosphates? Toward answering such questions but little has yet been done. Albuminous urine has a latitude in disease not yet understood. The same may be said in regard to the other articles noticed. To such points investigations should now be directed, and that they will be rich in results—practical, no one who has paid the least attention to the subject, can for a moment doubt.

To Medical Editors and Others—Perplexity—A Fair Warning.

There are some perplexities incident to editorial life which are needless, and can be easily corrected. The one we particularly complain of now, is of frequent occurrence, and we ask our brethren of the press to help us to modify it. We allude to the practice of sending a paper back to the Editor after *reading*, *dirtying* and *defacing* it. Since our connection with the press three numbers of our Blister have been returned, and each one *cut* and *soiled* in such a manner as to make it useless to us. One pseudo great man returned it and marked conspicuously upon the cover and envelop, "Returned by ———," after keeping the work a month and leaving the impression of his filthy fingers upon its pages. Another sent it back after defacing it, and had the Post-master to mark upon it, "Refused by Dr. ———," in large letters, in two or more places. Another returned it after bedaubing every page with his want of cleanliness, and keeping it a full month.

Now we ask all honest men if such a course is right, when they have not paid a cent for the paper, and, judging from their ungentlemanly conduct never intend to? These things are common, and all newspaper and periodical Editors have them to contend with. The unprincipled men who perpetrate such acts never think that each number of a paper or periodical costs its editor money, and has to be paid for in cash or its equivalent; hence, when a man disfigures an editor's paper and then returns it, he injures the editor and deprives him of a just due. The mere taking a paper from the office makes a man amenable for it, and the responsibility is increased when it is injured. If a man does not wish a paper sent to him, justice demands he should not deface it, nor take it from the office.

We sometimes send a specimen (and seldom at that) to a gentleman, but we never return the favor unless the CASH follows. If the gentleman returns our paper in good order, no harm done, but, when a man of a mere nominal existence sends back our Blister, and it defaced, he incurs our displeasure, because he treats us *meanly* and *ungentlemanly*. Now, to put a stop to such conduct, we propose to our Medical and Secular contemporaries, that we hereafter publish the names of all such trash to the world. For one, we intend to extend to such men what they deserve—*Exposure*. Who will back us?—*Georgia Blister and Critic.*

We have had reason to complain of the same things of which the Blister and Critic speaks, and think well of the remedy proposed.—[EDITOR.

THE MEDICAL COUNSELOR.—We have received several numbers of this work. It is published weekly in this city. R. Hills, M. D., is Editor and proprietor. According to the request of the editor, we enter it upon our exchange list.

STARLING MEDICAL COLLEGE.—The Commencement exercises in this Institution take place March 6; Dr. V. G. Dorsey delivers the Address for the occasion. The gentlemen who are candidates for the degree of M. D. are "well posted," and will make a valuable addition to the profession.

A Case of Vertebral Dislocation, with Favorable Termination. By J. U. Hickerman, M. D., Tiffin City, Ohio.

On the 11th of December, 1852, as I was returning from a ride to the country, in passing Professor R. Good's residence, I was accosted by his lady with, "Oh! Doctor, come in quick; you were sent for, but being absent we have sent for another Doctor, who, however, has not yet arrived."

Upon entering the house I found a female of considerable more than ordinary size lying in bed upon her back, in an extended position, with the head slightly turned to the right. The surface of the body was but little below the natural temperature, pupils dilated, pulse absent at the wrist and elbow, heart's action feeble and scarcely perceptible, respiration absent, except an occasional (one in about two or two and a half minutes) gasp.

I learned from the bystanders that the patient had been thrown from a wagon, the wheels of which had traversed the epigastric and hypochondriac regions of her body.

At first I looked upon the case as one in which organic life was partially suspended, as a result of the shock produced by the fall; and dispatched a person to a neighboring grocery for some brandy, which arrived simultaneous with Dr. E. Reeme, of this city, who had been summoned during my absence.

The brandy was given, at first cautiously, afterwards more liberally, without at all, for some time, affecting the circulation. I now advised Prof. Good and lady to send for the friends of the patient, (she being a domestic in the family,) inasmuch as we feared the existence of internal hæmorrhage, and that death would ensue, without a probability of surgical relief being afforded.

After the lapse of some time the pulse became perceptible at the wrist at first feeble, but soon distinct and of moderate fullness, but irregular, and in quantity of from sixty to ninety to the minute, not beating at the same rate for more than from five to fifteen continuous seconds.

I now suggested to Dr. R. the propriety of artificial respiration, which was commenced and continued for about the space of half an hour.

Vertebral dislocation, at this stage of our proceedings, suggested itself to my mind, and thrusting a finger into the pharnyx of the the patient, discovered a well marked, and easily distinguished prominence, at the junction of the fourth and fifth vertebra.

Upon this discovery I said to Dr. R.: "If you put your finger down her throat you may detect the nature of the case." Upon examination Dr. R. said : "it (the protuberance) was very well marked."

After a little reflection I seized the patient's head under my left arm, with which I made traction, and with the index finger of the right hand in the patient's throat, I made firm pressure obliquely upward, backward and to the left; after continuing this pressure for about forty to fifty seconds, the part against which the finger was placed gradually, yet quickly, receded in the direction in which the pressure was made, and instantly, as quickly indeed as the act could possibly be executed, the patient opened her eyes, and natural respiration was established. The patient immediately became conscious of what was transpiring about her, recognized the persons present, and upon being asked if she was suffering any pain, signified by signs (being unable to speak,) that she had, and when asked its locality, referred to the epigastric and hypochondriac regions.

Two hours after the above occurence I again seen the patient, and found her comparatively comfortable, with a pulse of 80, somewhat small and hard, and respiration nearly natural. At 7 o'clock, P. M., eight hours after the occurrence of the accident, reaction had ensued, accompanied with hot surface, accelerated breathing, quick, full pulse and thirst ; blood was now abstracted to the amount of about 25 oz, a saline cathartic ordered, and Tart. Emet. given in solution in sedative doses, and the patient was speedily restored to perfect health, which has been uninterruptedly enjoyed up to the present time, a period of twenty six months.

At the commencement of Starling Medical College, held on the 6th inst., the degree of Doctor of Medicine was conferred on the following gentlemen :

G. W. Pullen,
E. S. Merriss,
Van S. Seltzer,
A. V. Apperson,
Sam'l J. Smith,
J. W. Waters,
Jas. Ware,
T. Hudson Armstrong,
B. H. Hoyt,
J. C. Richardson,
Albert Longwell,
Isaac D. Monnett,
G. H. Bane,
Patrick McCann,
J. P. Cowan,
J .D. Airey,
D. Noble,
W. G. Scott,
N. B. Prentice.

The Honorary Degree was conferred on the following gentlemen: Dr. R. J. Mann, Milford, O.; Dr. Mustoe Chambers, Tipton, Iowa ; Dr. R. Culver, Logan county, Ohio.

Observations on Animal Heat. By T. W. FORSHEE, M.D., of West Jefferson, Ohio.

DR. DAWSON:—As animal heat has been a subject of much controversy, I deem it proper to add a few reflections on this important subject; and if they meet your approbation, you will do me a favor by giving this article a place in the "*Ohio Medical and Surgical Journal.*"

In discussing this subject, I will divide it into three heads:

1. *The Sources of Animal Heat;*
2. *The Amount Generated;*
3. *The Means of Regulating the Temperature of the Human Body.*

In the examination of the first part of this subject—the sources of animal heat—the mind naturally turns to that part of the animal economy which distinguishes it from the vegetable world—the nervous system; and to this has been attributed the production of animal heat. But although it may exert a modifying influence in its production, yet it cannot be considered the generator of heat. For we find that in the vital processes of organizations devoid of a nervous system, the same results are being constantly produced; that is, certain changes which are constantly taking place during the vital actions of vegetable organizations, are constantly attended with the evolution of a certain amount of heat. And although small at ordinary periods, and scarcely perceptible because of its being rendered latent by the evaporation of its moisture; yet, at the period of reproduction or flowering, the quantity is so great (where a number of plants are collected together) as to produce an elevation of temperature of 40 or 50 deg. above that of the surrounding medium. During the germination of weeds a considerable amount of heat is thrown off. With this fact every farmer and brewer is familiar, although he may be ignorant of the principle.

The amount is so great where large numbers are thrown together as to be distinctly felt by the hand. Now, all these facts prove conclusively that heat *may* be, and *is* generated in living organizations devoid of a nervous system. And we find, also, that during certain changes which are taking place most rapidly, as during the reproductive period, the greatest amount of heat is evolved. Now this change is found to consist in the union of the oxygen of the atmosphere with the carbon of the plant; or the absorption of oxygen, and the extrication of carbonic acid, and the amonnt of heat evolved is in proportion to the amount of oxygen absorbed. Now, by an examination into the subject of calorification in animals, we find the same phenomena, attended with the same results. In the respiration of animals we find the same changes continually taking place, that is, the inspiration of the oxygen contained in the air and the expiration of carbonic acid, hence we at once come to the conclusion that here is generated a portion of heat. And this conclusion is fully sustained by experiment. Yet this is not sufficient to account for all the heat generated in the animal economy. We must examine further: and we find the oxygen consumed is more than sufficient to form the carbonic acid exhaled. It must, therefore, unite with other constituents of the body, and this union is also a chemical action, and would be attended by the evolution of a certain amount of heat, but a part is used in the formation of water, by its union with hydrogen, which escapes in the form of watery vapor from the lungs. A portion, also, is consumed in the formation of the salts which are excreted, as the phosphates, sulphates, &c. The oxygen, uniting with the sulphur, phosphorus, &c., which are taken in as food, to form acids, which, uniting with the various earthy matters of the body, form the salts that are found in the excretions. All these actions are attended with the extrication of some caloric.

We find that vigorous exercise of the whole body produces a general elevation of temperature, and that the violent exercise of a particular part will produce an increase of temperature of that part, while the remaining parts of the body are unaffected. We conclude that the molecular changes that are taking place, are also attended by the extrication of caloric.

And this brings us to the second part of our subject.

The amount of Heat Generated in the Animal Economy.

As has been stated, the amount of caloric is augmented by exercise, either of the general temperature by the exercise of the whole body, or locally by the exercise of a particular part. In the first instance this is accounted for by the increased activity of the general circulatory and respiratory systems. In running, for instance, the muscles of the legs, arms, and chest are all in rapid motion—every movement causes the destruction of a certain amount of tissue, which must be replaced. This produces a determination of blood to these parts. The changes are rapid because the contractions of the muscles are rapid. The circulation is hurried, because the disintegrated matter must be carried off and new matter supplied. The respiration is also greatly hurried, because the carbonic acid and other matters excreted by the lungs must be thrown off, and the blood that is again to be thrown out for the supply of the tissues must be ærated before it is fit for use. All these changes are rapid, and the generation of heat is in proportion, and would be greater were it not for provisions for its regulation, which we shall discuss in another part of this article. We find that activity or rest affects the amount of caloric evolved. We find from observation, also, that it is varied by age, by different degrees of vigor in even healthy persons, and greatly affected by disease.

In case of premature birth, artificial heat must be assiduously applied in order to maintain the temperature at a normal standard, and in every case more clothing is required for the child than for the adult, or rather for a man or woman in the prime or vigor of life; for we find that as we advance toward old age, our powers of enduring cold air, not much greater than those of the infant. And as we would anticipate, we find that in diseases involving an accelerated pulse, and an increased respiration, the heat is augmented. In some diseases of the lungs, as Phthisis, where the respiration is very quick, the temperature is elevated. So, also, during the active stage of inflammatory fever, and in diseases of the heart, where the circulation is very rapid, we find an increased temperature. While on the other hand, in diseases where the circulation is feeble, and the respiration slow; as in cholera and diseases of a similar character we find a diminished temperature. Long exposure to an elevated temperature will affect that of the body, or exposure to a very low one, will decrease it, although it possesses to a remarkable degree the power of adapting itself to the surrounding medium. Operators in glass manufactories, in foundries and rolling mills, afford examples of their power to endure an elevated temperature. Instances are given of individuals who, from custom have been able to endure for a considerable length of time a temperature of from 300 to 400 deg., and I have seen men laboring with apparent comfort for days in an atmosphere whose temperature would have been intolerable to one unaccustomed to it. And so, also, we find that the inhabitants of the tropical climates live comfortably where the thermometer stands a great portion of the year at 100 deg.; and in the artic regions as low 50 deg.

The average temperature of the human body is about 98 or 100 deg., and the variations produced by the temperature of the air are very slight. Now what are the provisions for maintaining the natural standard amid all the changes to which it is exposed. In cold climates, we find the inhabitants making use of large quantities of animal food, and particularly of fatty matter. The New Zealanders and Kamschatkians use the pure oil of the whale; this supplies carbon to the blood, and from experiment it is found that the fatty matter contributes largely to the supply of material for the manufacture of heat. Activity and severe exercise also enable the body to maintain its temperature. The other extreme is met by the process of evaporation. There is in the healthy state, a constant secretion by the small glandulæ of the skin. This secretion is augmented by heat and decreased by cold. In very warm weather this secretion is very great, even when the body is in a state of perfect repose; and as it is constantly evaporating, any great accumulation of heat is prevented; for in its conversion into vapor a large amount of heat is constantly being carried off. In cold weather the fluid ordinarily excreted by the skin is thrown off by the kidneys, and thus the loss of heat is prevented by the vicarious action of one organ, when the other is depressed, or rather the two alternate with each other, exercising a counterbalancing influence on the temperature of the human body.

BOOKS RECEIVED.—We have received the following works for review in the Journal. They will all be noticed in next No. more in detail,—

Autobiography of Charles Caldwell, M. D.—A readable book, and one, too, that will make upon the mind of a young man a great many valuable impressions. It comes through the publishing house of Lippincott, Grambo & Co., Philadelphia, and, as a consequence, is very fine in mechanical execution.

"*What to Observe at the Bed-side, and after death, in Medical Cases.* Published by authority of the London Medical Society of Observation. Blanchard & Lea have given us this little volume in a costume that is well suited to the invaluable matter with which it is filled. For sale by Riley & Co.

Horner's Naval Practice—By Lippincott, Grambo & Co. 1854. Philadelphia.

This volume is written by G. R. B. Horner, M.D., Surgeon in United States Navy, aud is devoted to a consideration of the Diseases and Injuries of Seamen, with remarks on their enlisment, naval hygiene, etc.

To all this work will be interesting, but to a certain class—those connected with Naval service, it must be eminently useful. The diseases and injuries of seamen are, in many respects, peculiar, and, even from well educated men, require special consideration.

Much will also be found in this book relative to the duties of Medical officers, Surgeons, Assistant Surgeons, Passed Assistant Surgeons—the mode by which they are appointed—the defects existing in this mode, etc.

At the present time many young men seem to desire places in the Medical department of our Navy. All such should at once possess themselves of the work before us, and they will see shadowed out an outline of the qualifications and duties required.

Clinical Notes of Surgical Cases.—From the Clinical Lectures of E. M. Moore, M.D., Professor of Surgery in the Starling Medical College, Columbus. (Reported for the Journal.)

(*Continued.*)

Cataract.—The means of removing this cause of blindness was illustrated in two cases. The method employed was by couching. The lecturer remarked that this and the one by absorption were the more usual modes made use of in this country. Extraction had never become so popular as in Europe, although when it is successful it is more completely so than any other method. By any other we frequently have trouble from portions of the lens. Extraction, moreover, produces more speedy vision, unless we except the most fortunate cases treated by couching. This latter method presents less danger than extraction, and the process of absorption still less. Moreover, the condition of the lens render the different operations more or less applicable. When firm, it is to be extracted or depressed. In the last patient which I have just operated upon, I was induced to believe that the lens was not very soft in consequence of its grey color. When it is soft it is white, and of course there may be an imperceptible shading of color until it is entirely transparent, or black, or amber-colored, which last three conditions are indices of a firm lens. Age furnishes some means of diagnosis with reference to this fact. In the very young, it is apt to be soft, and in more advanced periods, hard. In the operation for couching, we desire firmness of tissue in order that the lens may be pushed entirely from the line of vision. This case the light grey color rendered the diagnosis a little doubtful, and the needle being introduced at the usual point, a line back of the cornea, was carried between the iris and the lens, pressure made upon the anterior part of the opaque body, a little above the center, in order to carry it down, but it was rather softer than I expected, and while the central portion became disengaged, and was removed to a lower spot, the part of the external layer and the capsule remained in situ. The needle was brought to bear upon this at the center, and freely cut, so that it must be completed by the process of absorption.

Granular Conjunctiva.—In speaking of the various persons who came before the class with this disease, Dr. Moore took occasion to call attention to the present tendency to underrate the advantages of local depletion. Scarification of the lids had been very much reprobated for producing permanent ridges upon the tarsus, which maintained the inflammation upon the ball, and which remained permanent. "This," he remarked, "it seems to me, need not happen, and if the sharp knife is delicately used, so that the incision does not go deeper than the mucous membrane, the roughness will not occur. The scarification alone, even as local measures, cannot be relied on. Nitrate of silver, and other caustics, must be employed to give smoothness to a surface which is roughened by organized effusions. In the application of these remedies, and especially of the nitrate, great care is to be used, in order to avoid an excessive quantity at any one time. Violent, and even dangerous, inflammation often results from neglect of proper precaution. Others propose a strong solution of 20 or 40 grains to the ounce, which is applied by camel's hair pencil. Here we get too much of a solution, not strong enough. The best mode I have ever seen is to moisten a brush, and leave not a single drop upon its end. This now rubbed upon a crystal of nitrate of silver, gives us an exceedingly minute quantity of saturated solution. If the brush is drawn across the granulated lid, an extremely delicate, but perfect, pellicle is formed on the surface, which subserves the double purpose in destroying the sharp points of the granules and protecting the eye from their attrition. This is to be frequently repeated, often daily. But you must not understand that local measures alone are sufficient to the cure of this disease. The general health must be carefully attended to, for, like other chronic inflammation, it is almost hopeless to expect recovery unless this is placed upon a satisfactory footing.

Lithotomy.—The following history of the case, and remarks of the Professor, occur in connection with a case in which the operation was performed before the class.

A. Mitzell, a German, aged 42, but much older in appearance, below the average stature, had sufferered from irritable bladder for the past three years. Until nine months since he says he had, at varying intervals, paroxysms of severe pain in the region of the kidneys, followed by the discharge of small calculi. When free from these attacks he was able to pursue his ordinary labor. Since that time, however, he has passed no calculi, but the irritability of the bladder, has been excessive, with constant and steady pain, obliging him to rise from ten to fifteen times during the night to void his urine. By the use of strong anodynes, he was able to restrict himself to two or three times. In this condition he remained when seen (the 25th December last) first by Dr. Hamilton, under whose care he remained before and after the operation. Pulse was about 110. Mouth and fauces dry, skin hot and his appetite greatly impaired. His sleep was still much disturbed. Micturition was very frequent and accompanied with sensations of scalding. He complained of constant pain around the situation of the kidneys and bladder, and numbness upon the inside of the thighs. He also suffered from hæmorrhoidal tumors and tenesmus. The lower part of the abdomen was exceedingly sensitive to touch and pressure. Dr. Hamilton introduced a silver catheter (having no other with him at this visit) and recognized the presence of a foreign body in the bladder. Three days after he introduced a steel sound and immediately made out a calculus with great facility in all postures of the patient. Striking the stone produced a very sharp and loud tick. He was advised to submit to an operation for the removal of the stone, and was meanwhile treated by hip baths, rest and anodynes. The patient was brought before the class and lithotomy (by the lateral method) performed upon him by Dr. Moore, on the 13th of January. The operation presented no difficulties but such as occur in the more favorable cases.

Less than a pint of blood was lost, which seemed to come from the superficial perinæal arteries and branches of the hæmmorrhoidal, which a little pressure and exposure entirely restrained. The incision through the prostate was completed by the probe-pointed scalpel. Two calculi were found—one exceedingly soft, which crushed under the forceps—the other was removed entire, weighing two drachms.

He was kept under the influence of chloroform during the operation. He was immediately afterward carried to his bed in Starling Hall. By the free use of opiates he suffered but little for the first four days. There was no tenesmus of bladder. At the end of that time he had a severe chill, followed by high fever and sweating. This was succeeded (in forty-eight hours) by another well-marked chill, terminating in continuous fever, with irregular chilly sensations. The tongue was dry and hard, the skin hot, respiration labored, reaching 40 a minute. Pulse 120.

The wound (which was left open) progressed satisfactorily. After a few days it became reddened and hard, involving the perinæal region generally. In some portion of the wound adhesions took place—in the remainder granulations proceeded rapidly, so that the discharge of urine from the wound was arrested on the eighth day. A small quantity had also passed by the urethra a few days previously.

The fever persisted for about three weeks. Irregular remissions occurred in its course, during which the frequency of the pulse was reduced to 94. At the end of the fourth week the respiration had become natural—the skin and mouth moist. The fever subsided and the appetite began to improve. He enjoyed comparatively excellent rest, with only two or three interruptions at night. By this time, also, the wound had perfectly closed. He was treated during the febrile attack by stimulants and quinine, with admirable results.

In commenting upon the case at the time the lecturer remarked that the lateral operation for stone was the one usually employed in this (and, indeed, in every) country, but many modfications have been proposed by distinguished surgeons on both sides of the water—the intent of which uniformly is to obtain a large opening in the perinæum, without increasing the hazard to the operation.

Dupytren, in the latter years of his life, performed the bi-lateral operation almost exclusively, by which an incision was made in each side of the prostate. These incisions were directed downward and upward, in the same direction as the single one in the lateral method, but he has not been followed by the profession either in France, England or this country, as there is some danger of wounding the ejaculatory ducts, and the opening in the prostate requiring a longer period of time for its closure. Moreover, the increased space obtained is less than might be supposed, for a stone much larger than the prostate will readily pass through a cut in the side of this gland. We are always anxious when entering the neck of the bladder not to extend the incision through the prostatic fascia, for the danger arising from infiltration of urine is vastly increased in that case. When the stone is seized and traction gently and steadily employed, the gland gives way, sliding along the inner surface of its fascia—whereby a large stone can be removed without its division or laceration. Still, if it can not be done, an incision should be further made on the stone in order to enlarge the opening while traction is going on. If the stone, however, be very large, which, of course, can be entirely determined by the introduction of the finger, it is better to convert the operation into a bi-lateral one by introducing a scalpel and making a symmetrical cut upon the right side of the prostate, and thus effecting, when the necessity occurs, the same division of the parts which Dupytren obtains by his "lithotomic cache."

The lecturer further observed that the seizure of the stone was often difficult, and in truth when there was any considerable delay it almost constantly arose from this difficulty. There were many reasons for this. It was sometimes retained in the upper part of the bladder, by a sort of "hour glass" contraction of this viscus, and when the urine is voided the bladder presents a cylindrical appearance, the top of which reaches to the superior part of the pubes. This is rare, but the lecturer had seen and operated upon one such case. Curved forceps are necessary to reach the stone in such a position, and even then they are applied with difficulty. Again, the stone may become encysted, hernia of the mucous membrane may take place, and the urine not being thoroughly evacuated from this little sac, deposits occur, and their aggregation within this secondary sac forms a stone. Seizure here is still more difficult and sometimes impossible, for when the bladder becomes emptied the orifice of the sac becomes closed so that even the fingers can not detect it when thrust into the bladder and when discovered there is much trouble and danger in seizing it, for the aperture may be so small that the forceps cannot be introduced, and even if it be possible there is no inconsiderable fear that they may not include the portion of the mucous membrane in their grasp. And if the instrument cannot be applied the opening must be enlarged with a probe-pointed Bistoury, which always increases the danger of infiltration of urine.

The usual position of the stone, however, is at the lower part of the bladder, and when the bladder is open, a sudden gush of water ordinarily brings the calculus towards the neck, where it is easily seized. But there may be trouble when it lies in the lower part of the bladder; if the prostate should be enlarged, the depth of this cul de sac is very much increased, and the forceps reach the stone with some difficulty, so that even curved ones must sometimes be employed. Ordinarily, the calculus is best grasped by dilating the blades of the instrument horizontally, and when dilated, giving it the sweep of a quarter circle which presses the outer surface of the hollow blade against the wall of the bladder, and brings it underneath the stone, thus diminishing the danger of wounding the mucous membrane when closing the blades. It is unnecessary for me to say, that all such manipulations, both when searching for and extracting the stone, must be conducted with great delicacy and tenderness. No man is justified in violating these just and sound rules of surgery, in hopes of completing a "*brilliant*" operation!

The urine will now flow along the surface of this wound, and it has been customary with some surgeons to introduce a large catheter through the wound into the bladder for the purpose of preventing so large an amount of this irritating fluid from coming in contact with the raw surface; but some urine will flow on the outside of the catheter, producing more inflammation and infiltration of albumino-fibrin in the adjoining tissue, than in ordinary granulating wounds. It does not appear that the slightly increased quantity of the same fluid produces much more inflammation, and the presence of the catheter in the bladder induces almost uniformly, tenesmus to a great degree. It is not uncommon for the urine to pass partially, if not entirely, by the urethra on the second day. This is incident to the excessive swelling of the soft tissues and perinæum which closes up the wound so firmly as to retain the fluid. This, however, soon subsides, and then it gaps sufficiently to allow the urine to pass through the cut. Occasionally, union by adhesion occurs, a fact which seems to be ignored by nearly all writers upon surgery, and an illustration of which was presented by a case operated upon by myself in this Institution the last winter. In this patient closure took place on the second day, and no more urine passed except by the urethra. Ordinarily, a portion passes by the urethra at the termination of about eight or ten days, and the wound gradually closes, until at the end of two or three weeks the urine ceases to pass by its surface, and then it rapidly cicatrizes.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*Sore Mouths of Nursing Women, (Stomatitis Materna,)* By Geo. W. Maris, M. D., Columbus, Ohio.

The Mucous Membrane of the mouth is liable to various forms of inflammation, which may be either simple or erythematic, eruptive or follicular. The former we commonly meet with among infants, and is generally regarded as an idiopathic affection, whilst the latter is more frequently recognized among adults as a symptomatic disorder. Strange as it may seem, though this disease, under the names of Apthæ and Stomatitis, (Infantum et Adultorum,) is treated of at some length in our systematic works, yet little or no reference is made to it, as it presents itself among *nursing women*—our Journals containing for the most part all that has been written of any value upon the subject. In the last number of the "Western Lancet" an elaborate paper, under the head of "Stomatitis Materna," by Dr. Hutchinson, of Hendricks county, may be found, which will repay the reader for its perusal, and to which he is referred for much valuable information.

The "sore mouth of nursing women," the name we prefer, and the most familiar one known to the profession, is manifestly a follicular inflammation, produced by impoverished blood, and consequently attended with a low grade of vascular action. It is not peculiar to this country, as erroneously supposed by many, but having a preference for those regions where malarial disorders prevail, and most frequently met with in such districts, the opinion of indigenous growth may be accounted for. Neither is this disease confined to the nursing period, as its title would seem to imply, but may exhibit itself at any time during the utero-gestative process, as well as the period of lactation, and when occurring in subjects of a tubercular diathesis, or depraved and feeble digestive powers, is frequently troublesome and vexatious, and always attended with more or less danger.

Some physicians may regard the "sore mouth of nursing women" as a disease of minor consideration, inasmuch as it so often yields to mild and paliative treatment, whilst the more obstinate cases, like many others, are consigned to a blind chance, to work out their own cure, or end their course in a fatal result.

The young practitioner, however, regards the case in a different aspect. His fortune and his reputation are alike in perspective, and every case of disease, simple or serious, that falls under his notice, is full of magnitude and importance. He feels that professional success hangs upon skill, and this upon accuracy of judgment, and where the latter fails, the treatment of disease becomes hap hazard and empirical, endangering alike his practice and his reputation. The necessity, therefore, for a clear and correct view of disease, pathologically and therapeutically, is at once obvious.

PATHOLOGY.—The local disease or "*mouth sore,*" we regard as the mere expression of a deeper, though less visible and tangible trouble, viz: *a blood disorder,* or an abnormal condition of its normal elements, consequent upon a state of pregnancy or lactation, during which processes a heavy demand is make upon the circulating system of the mother, and which her assimilative organs are bound to supply, even at the risk of physical suffering and disorder in her own person.

Where these organs are *strong* and *vigorous*, and competent to furnish the pabulum required, without endangering the maternal health, we fail to meet with such forms of disease. But in such females as are naturally of feeble constitution, possessing a scrofulous or tubercular diathesis, or weak assimilative powers, the result of acquired or hereditary taint, or in any wise *constitutionally unfitted* for the task of procreating the species, it is not uncommon to find this disease—"*sore mouth*"—exhibiting itself in some form or other, and frequently complicated with other associations, alike the offspring of the same parent mischief.

A few weeks since, we were called to see, with Prof. Dawson, a lady in her fifth month of gestation and her fourth child. We found her moribund. She was perfectly anæmic, as white as alabaster, and had been more or less so during each period of gestation, frequently suffering from "sore mouth" and its concomitant evils. From indications, the fœtus had perished some time previous. In this instance, death manifestly resulted from the failure of the act or function of utero-gestation, consequent upon an exhausted or impoverished blood, during which struggle the life of both mother and child were sacrificed. As in all similar cases, the "sore mouth" here was but a link in the chain of diseased action, and the offspring of the same evil, viz: *blood deficient in its normal elements.*

This deficiency more particularly concerns the *red corpuscles,* with an increase of the fibrinous element, now regarded by physiologists and pathologists as an excrementitious product, or waste tissues of the body. (Simon.)

M. Jacquimiér, from an examination of two hundred women at the eighth and ninth month of pregnancy, found a *diminution* of the *red corpuscles.* M. Cazeaux says that this condition of the blood is the most frequent cause of those functional disturbances in pregnancy usually attributed to *plethora.* Owing to the fact that such cases are benefitted or cured by iron and animal food, he likens them to chlorosis, in which a similar condition of blood is found.

The subjoined extract and table, showing the marked influence which pregnancy exercises over the composition of the blood, we take from the Western Lancet (H.'s paper):

"Andral and Gavarett analyzed the blood of 34 pregnant women. In 32 of the cases, they found the red globules below the healthy mean standard, in 6 of which they ranged from 120 to 125 parts in 1000, and in 26 from 95 to 120; they also found, that for the first six months, the fibrin in the 34 cases, uniformly below the natural quantity, varying from 1.9 to 2.9, while during the last three months it exceeded it, varying from 2.9 to 4.8, and averaging nearly 4. This gives the reason of the buffy coat of the blood in pregnancy, and we hence see that it is *anæmic.*

"Simon gives the analysis of the blood of 9 pregnant women, viz: 1 at the fourth month, 5 at five and a half months, 1 at six, and 1 at seven months, and before I quote the table of analysis, I may remark that the average specific gravity of the blood of a healthy female is 1050; and I may, for the sake of illustration, give the healthy constituents of the blood, the proportion of each in the 1000 parts, which are, viz: water 790, fibrin 3, corpuscles 127, solids of serum 80.

This table shows the specific gravity, both of the defibrinated blood and of the serum.

He gives the mean, maximum and minimum specific gravity; and by calculation, we find that the specific gravity of the blood of the nine pregnant females was: mean 1038½.0; maximum 1440.95; minimum 1034.9. The constituent proportions as follows:

	Mean.	Max.	Min.
Water	804.6		
Fibrin	3.5	4.0	2.5
Albumen	66.1	68.8	62.4
Blood Corpuscles	111.8	127.1	87.7
Extractive Matter and Salts	6.6	8.7	4.7
Fat	1.922	2.519	1.115

This fat consisted of serolin, phosphorized fat, cholesterin, and saponified fat.

The salts in a thousand parts of blood consisted of

	Mean.	Max.	Min.
Chloride of Sodium	3.2	3.9	2.3
Other Soluble Salts	2.4	2.8	1.8
Phosphates	0.425	0.690	0.282
Iron	0.449	0.490	0.370"

Hence we see, that the blood of the pregnant woman is deficient in red corpuscles and solids, generally with an increase of fibrin, a state amply sufficient to produce all the disturbances to which she is subject during her puerperal condition and lactation afterward, for the demand upon her circulating system still continues during this period.

Symptoms.—We have said before that the "mouth sore" is but the expression of a deeper disorder—an impoverished blood. The stomach, therefore, failing to receive good food for its support, creates imperfect chyle globules, and these in turn imperfect blood corpuscles, and thus is lost the balance, between the demand of blood and the nourishment of the body to supply the demand. The first symptoms, then, as might be anticipated, are those of a dyspeptic character. The patient complains of debility, loss of appetite and eructations, flatulence, uneasiness and pressure at the pit of the stomach. Along with these symptoms, upon examination, will be found urinary derangement, with painful micturition, &c. Following these ailments, after a longer or shorter duration, a scalding sensation of the mouth is complained of.

Here we may observe that the dermoid tissue, being less actively supplied with nutritive material than the other tissues, will be found, under the circumstances, the first to manifest lesion of function and structure. Upon inspecting the mouth about this time, it will be found to present the appearance of simple inflammation, (stomatitis) patches or spots being observed on the inside of the lips, on the tongue, or upon the fauces.

After a longer or shorter duration, and with proper treatment, this soreness or other symptoms subside, and an interval of relief follows, or, the case becoming aggravated, small, transparent, greyish or whitish vesicles become visible, having a raised ring at their base. Subsequently the vesicle breaks, an ulcer follows and spreads, the ring gradually disappearing. Cicatrization succeeds, sometimes rapidly and again tardy, whilst ulceration is very apt to recur after it has once healed. (Dunglison). The eruption may attack consecutively any of the mucous passages. Cases are on record, where a transfer of the irritation to the vagina, the nasal passages, the larynx, bronchiæ and eustachian tube took place, thus shewing not only its migratory character, but also that the producing cause is *one of a general pathologic class.*

In cases tending to a fatal issue, the entire tract of the alimentary tube may become involved, and hence after death, the stomach and bowels often exhibit traces of follicular inflammation and ulceration.

Treatment.—Under an idea of Plethora, (all diseases of pregnancy were formerly so regarded) our predecessors relied upon *antiphlogistics* as the only safe line of action, and with what success, the reader may well judge. Examining the "sore mouth of nursing women" in the light of its present pathology, the necessity of a tonic and invigorating course will be at once obvious. Our plan of treatment is two-fold. First, to correct and improve the digestive organs. Secondly, to furnish such materials to the blood, artificially, as will augment the amount of its red corpuscles and decrease that of the fibrinous element. The first indication is fulfilled by the use of alkalies and antacids with vegetable tonics; we prefer a mild infusion of cascarilla bark. If indications require a cathartic, we prefer the salines (a seidlitz powder). Should diarrhœa alternate with the mouth sore, give vegetable astringents and opiates, omitting alkalies.

Infusion of logwood with cinnamon will be found to be an excellent and agreeable adjunct.

Gargle the mouth with the following:

℞ Boras Soda ʒj.
Sacch Albi ʒij.
Tinc. Opii ʒiij.
Aqua Rosa ℥viij.

Mix. Use three or four times a day.

Should the case not yield a ready and favorable response to the above curative measures, our resort is to iron. Some prefer the protocarbonate, others Quevenne's metalic iron, and others again the pure carbonate.

℞ Carb Iron ʒj.
Ginger ℥ij.
Sup. Carb. Soda ʒſs.

M et ft. in chart No. 12.

S. one 3 times a day in a little water. Continue gargling, and touch ulcerated spots with Nit. Argt.

Diet.—Good beef tea and similar ptizans, which will convey to the blood the wholesome elements it needs, with as little labor as possible to the digestive organs. Pay attention to the teeth and gums, and preserve them free from all vitiated matters or secretion, as such impurities have an influence upon the stomach.

To fulfil the second indication, give cod liver oil in conjunction with Quinine and Arom. Sulph. Acid, or a liberal use of wine, brandy or malt liquor, as may suit the taste or caprice of the patient.

℞ Quinine ʒj.
Elix Vit. ʒij.
Rose leaf tea ℥riij—mix.

S. a teaspoonful three times a day.

To Prof. Evans, of Chicago, belongs the credit of having first recommended the Cod Liver Oil in "sore mouth of nursing women." Others bear testimony to its beneficial effects. We have not had occasion to use it as yet; therefore cannot speak from experience. Recent chemical researches award to it the property of increasing the red corpuscles, and diminishing fibrin. It is worth a trial.

Neglected or badly managed cases of "sore mouth," upon close inspection, frequently betray local congestion or structural disease in one of the large cavities, particularly after repeated and protracted attacks. Under such circumstances, the treatment will be altered, amended or modified in a manner which will suggest itself to the mind of the attending physician, always bearing in mind the *asthenic* nature of the predominant disease, and the advantages to be derived from local measures.

Age, locality, diathesis, and the prevalence or not, *at the time,* of an epidemic, should be considered in the account, and receive their due attention.

Weaning.—Let this be a final resort, a compulsory measure, only to be recommended when all other means fail, and the Medical Art has been exhausted in search of remedies or measures to crown the cure, or bring desired relief. In sundering such a relation, we not only "inflict a wrong upon the mother's heart, which none but a mother can feel, but at the same time we deprive a harmless being, wonderfully and fearfully made, of that nutriment which the laws of Heaven have ordained for its existence."

Tabular Statement of 12 *cases of "stomatitis materna," shewing the direct ratio of the severity of the disease; as compared with the immature age of the individual, and the number of births, crowded into a short space of time.* By Wm. Lockhart, M. D.

Case	1,	aged	24	years.	3d	child.	max.	severity.
“	2,	“	26	“	3d	“	“	“
“	3,	“	25	“	4th	“	“	“
“	4,	“	22	“	3d	“	“	“
“	5,	“	17	“	1st	“	“	“
“	6,	“	21	“	1st	“	min.	“
“	7,	“	25	“	4th	“	max.	“
“	8,	“	23	“	3d	“	“	“
“	9,	“	22	“	1st	“	min.	“
“	10,	“	20	“	1st	“	“	“
“	11,	“	20	“	1st	“	“	“
“	12,	“	21	“	1st	“	“	“

In 4 of the above cases, Crural Phlebitis was an accompaniment. In 7 of them, (all that were examined) the urine was highly acid, and in all at some stage of the disease, severe pain was felt on passing water, (uric acid or its salts, urate of ammonia or soda, being in excess.) In case 5th, the disease persisted eight months, and during the latter part of the term of her sickness, albumen was found in the urine in connection with epithelial cells, altered blood globules, and uriniferous tubules. (Hutchinson.)

In conclusion, a word with reference to Hematology. The blood, as a source of disease, has of late years engaged the observations of many excellent and prominent physicians, and their investigations have led to important results, at once gratifying to the profession, and giving a louder earnest that more will yet be accomplished in the field of medical science.

The grave in which lay buried for so many centuries, the old doctrine of "Humoral Pathology" has been re-opened—its body exhumed and re-examined, new revelations have been made upon more correct data, and sounder principles of philosophy.

The light of Chemistry has directed toward the blood its blazing fires, and tried in its crucibles, and by its penetrating methods of analysis, *facts* have been elicited which clearly establish the claims of the old doctrine, (considered for ages as exploded,) to some truth and more worth. Thus—

> "Truth crush'd to earth, will rise again."

Morgagni and Mascagni, if now living, would blush to read their opinions, once given to the medical world, and advocated with so much zeal.

Their opinion of the modus operandi of certain medicines, in diminishing a supposed "*Viscosity of the Blood,*" they would now denounce with as much ridicule as they once supported and defended with so much earnestness and spirit. Chemistry is still pursuing her researches with unabated interest. Her fires are still burning, and the smoke of her incense still ascends from her altars. What her ardent votaries will yet accomplish, the future will determine.

Microscopic Anatomy is also in the field of exploration, contending for the palm, and subjected to its inquisition, it is hoped that many knotty and abstruse points in medical science will yet be unravelled, which will establish more *correctly* the claims and pretensions of the "medical art" to the character of a "*profound science.*"

Thus far, illustrations have been presented and facts developed, highly important in a practical point of view, and which, says Dr. Marshall Hall, may be summed up under the following heads, and are, viz :

"1st. In many diseases, as fever, inflammation, chlorosis, scorbutus, &c., there are many undoubted morbid changes in the blood itself.

2d. That other morbid changes are induced by an unwholesome atmosphere and an impure diet.

3d. That various miasmata in the atmosphere, and various poisonous qualities in food, produce morbid changes in the blood.

4th. That suppressed morbid secretions induce morbid changes in the blood.

5th. That *excessive secretions* induce other morbid changes in this fluid.

6th. That an *affection* of the *innervation*, or *nervous system*, may produce *its* peculiar changes on the circulating mass."

When we reflect how many of the above causes are brought to act upon female health, in a somewhat double capacity, during her period of gestation and lactation, is it at all surprising that her own blood should at times suffer deterioration, qualitative and quantitative, and thereby render her a subject of disease? Is it not *more surprising*, that woman, subjected to the influences of so many producing causes of physical disturbance, with a constitution of body, frequently but illy fitted for the function of utero-gestation, should, during this act, and subsequently, so often escape, even a "Stomatitis."

Query.—It may not be irrelevant to our subject to inquire, to what extent may not an abnormal condition of the blood, be *responsible* for that singular phenomenon—*Monstrosity?*

How far, may not disturbed innervation, affect the chemical constitution of the blood, thereby perverting or otherwise deranging the more perfect growth and development of the *fœtal tissues?*

ART. II.—*Gun-shot wounds.* By R. S. CONNER, M. D., Sarahsville, Noble county, Ohio.

Samuel Kirk, aged 21 years, corpulent, full athletic constitution, and of chaste and temperate habits, was on January 1, 1855, shot laterally through the lower region of the bowels by the accidental discharge of a U. S. rifle, sending the ramrod directly through his lower bowels and left fore-arm, which was flexed on his body. The gun was discharged in the act of ramming down the charge, (which was large,) driving the missile through the plastering, lath, inch floor, and two beds on which he unfortunately lay sleeping, in one of our public hotels, on the second floor. The rod penetrated obliquely the right ilium about one inch below its crest, and two inches anterior to the sacro-iliac-synchondriosis and emerging from the body, about three inches in front of the opposite symphysis, touching the crest of the left ilium, and penetrating the left fore-arm near to the joint passing between the ulna and radius. The force being spent, he was now transfixed in this awful position. After the rod was extracted, which required considerable force, a severe and protracted chill soon followed, attended with great prostration of the vital forces.

Pulse was now indistinct, patient gave strong evidence of the rapid approach of dissolution, but by the active use of stimuli for two or three hours, an effort at re-action could be perceived. The symptoms now, at 12 M., were as follows: Pulse can be counted, and is more distinct, severe and violent pain in the back, attended with constant restlessness. Gave Sul. Morphia gr. $\frac{1}{4}$ to relieve pain in the back, and produce quiet. 3 P. M., pain in the back some relieved, pulse 40 and weak, patient complains of a dull pain in the region of the bowels where the rod passed; no fullness of the bowels, nor any evidence of extensive internal hemorrhage. Ordered Castor Oil, 2 oz. every 4 hours until two doses were taken, followed by stimulating enemata, which produced alarge soft discharge from the bowels, which to some extent relieved the pain in the back; at this time patient was unable to urinate, and bladder full; practiced catheterism. Ordered Opium gr. 1$\frac{1}{2}$ every 3 hours until pain was relieved.

Jan 2, 8 A. M. Patient has slept some during the night, decubitus on the back, pulse 60 and disposed to intermit, pain in the back has returned, and bowels are some sore over the region of the wound. Passed a catheter again into the bladder, and drew off a pint of healthy urine, (an operation, by the way, necessary for the next fortnight,) gave opium as before until pain was relieved, Castor Oil was again ordered for the bowels.

Jan. 3, 7 A. M. Patient sleeping and complains but little, says he loves to sleep, pulse 100, small and intermitting, head is hot and skin dry, thirst considerable. Gave a Seidlitz Powder and the effervesing draught to alay thirst. 3. P. M., stupor has increased, and patient is aroused with difficulty, pulse 120, small and irregular, a full and violent re-action now obtains. Opened a vein in the arm, intending to be governed by the effect the bleeding had on the circulation, during which operation, the pulse regularly became more distinct and less frequent; the blood flowed *pleno rivo,* until about twenty-four ounces were taken, when patient awoke and expressed himself much relieved. Opened the bowels with oil and applied cold to the head.

Jan. 4. In the morning patient much better, pulse 90 and regular, thirst and stupor somewhat abated, has some pain in the back and soreness in the bowels, takes some nourishment and drinks slippery-elm mucilage. Suffice it here to remark that from this time, up to Jan. 15th, patient made a rapid improvement, under the daily use of laxatives through the day, and opium at night, accompanied by a strictly anti-phlogistic diet, and gave evidence of a speedy convalescence. The bowels now became sore, particularly in the right hypochondrium, and spinous process of the same ilium,—pulse soon came up to 110 strokes per minute, attended with all the concomitants of another re-action.

Jan. 16. Soreness has greatly increased in the region where the rod entered the body, pulse 120 and corded, thirst, head-ache, furred tongue, and retention of urine. Practiced catheterism, and prescribed Olium Ricini, oz. 2 every 4 hours, until three doses were taken, then gave enemata, which evacuated the bowels and produced some relief. Gave opium at bed time.

Jan. 17. Symptoms same as yesterday, with the addition of some fullness in the right hypo-chondriac and lumbar regions. Decubitus on the back. Treatment same as on yesterday.

Jan. 18 and 19. Symptoms unchanged.

Jan. 20. Tumefaction over where the rod entered the body, furred tongue and other symptoms as before.

Jan. 21 and 22. No change in symptoms worthy of note.

Jan. 23. In the morning, pain in the right side is extreme, thirst urgent, pulse 140, patient very restless, and presents an anxious expression of the countenance. 3 P. M., has passed from the bowels (without purgatives) about one quart of partly decomposed grumous blood, and extremely fœtid, which abated all the worst symptoms, and produced measurable relief. Patient now again approached the period of convalescence, which for the next 4 weeks was gradual and permanent, and now, Feb. 28, is able to walk about through his room, says he feels well, and is rapidly gaining flesh and strength.

Remarks.—The above case presents to my mind, the following points:

1st. Perforation laterally of the parietes of the lower region of the bowels, including the peritoneum on both sides.

2d. Perforation of the ascending colon, and slight injury of the right kidney, as evidenced by the hemorrhagic and purulent discharge on the 23rd day, and subsequently, and by pain in the kidney, and the simultaneous discharge of mucous from the bladder.

3d. The small intestines were not perforated on account of the position of the body, it being on the right side and inclined forward, the rod would readily pass behind them, and that they were easily evacuated and discharges thin.

4th. That there was abcess where the rod entered the body, involving the peritaneal surface around the wound to a considerable extent, and communicating with the wound of the intestine, as indicated by the gradual swelling, severe fixed pain in that region, and finally the discharge of sanguinous, and purulent matter from the bowels.

5th. The curative process was by suppuration, and granulation, which was aided by quiet, loose diet, and preserving the bowels in as placid a condition as possible.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art. 1.—*Discussion at the Imperial Academy of Medicine on M. Depaul's Report on the Treatment of Displacements of the Uterus by Intra-Uterine Pessaries.*

After some remarks from M. Piorry, the discussion on this report, of which an abstract was given in our preceding No., p. 257, *et seq.*, was opened by M. Malgaigne, who, while admitting the zeal and talent of the reporter, regretted to find so much party spirit in the report, which more resembled the impassioned argument of a special pleader, than a plain and impartial judgment of facts. He could not consider as *repugnant to common sense* a treatment which had been practised by Velpeau, Amussat, Simpson, Huguier, and Valleix. It appeared even from the report, that in some cases the intra-uterine pessary had been useful, and sometimes it had procured instantaneous relief, showing that the symptoms were really owing to displacement, and he had often witnessed cases of descent of the uterus, where the use of a pessary had put a stop to all the symptoms; the hypogastric belt, also, by replacing the uterus, had often produced the same beneficial results. It appeared to him that the important inquiry was to establish a differential diagnosis of uterine affections; since the same symptoms were ascribed by some exclusively to displacements, by others exclusively to enlargement (*engorgement*), by others to granulations, ulcerations, etc., etc. In neuralgia of the uterus, the pessary, he thought, might certainly be serviceable. In short, the intra-uterine pessaries ought not to be entirely rejected, but their use should be restricted to cases without inflammation, acute or chronic, the instrument should be employed cautiously, and not be allowed to remain permanently; and, above all, the treatment should be controlled according to rational indications; the practitioner should know *what he does and why he does it.*

M. Huguier, who had not signed the report in consequence of differing from M. Depaul in some of his conclusions, made a full and able statement of his views. With regard to the intra-uterine pessaries, he thought that they ought not to be entirely rejected; but that their use should be confined to those exceptional cases of displacement giving rise to serious symptoms, which resist other means of treatment, that their application should be made with great caution and carefully watched. He especially commends their efficacy as emmenagogues, when other means have failed. On the pathological question, he explained the circumstances under which uterine displacements occasion no symptoms; and after distinguishing the local and sympathetic affections which are occasioned by inflammations etc. of the uterus, he defines those symptoms which properly belong to and are occasioned by uterine displacement, particularly disorder of the menstruation, and distressing affections of the bladder and rectum (frequent micturition, retention, obstruction of the rectum, etc.,). He considers that deviations, especially ante and retro-flection, may occasion sterility, and maintains that the displacements are undoubtedly curable. In conclusion, M. Huguier relates his experience of the general and local treatment of the displacements by pessaries, etc., and describes the methods by which he has succeeded in replacing the uterus when retro-flexed by the insertion of pledgets (*mêche*) of lint in the rectum.

M. Hervez de Chégoin was of opinion that the displacements may occasion most distressing symptoms, which are only to be relieved by replacing the organ. But this result ought to be accomplished by vaginal pessaries external to the uterine cavity. The intra-uterine pessaries had produced so many serious accidents, that he was surprised any one could follow a method attended with such risks. He considered that they ought to be altogether dismissed from practice.

M. P. Dubois denied that the vaginal pessaries recommended by M. Chégoin, could ever effectually replace a retroverted uterus; consequently, he considered the intra-uterine instruments to be perfectly rational, and indeed the only means capable of effecting the end in view. The only question was, are they without danger? It is certain that their introduction frequently gives rise to severe, sometimes even fatal consequences; sometimes the instruments cannot be tolerated; while, in some cases, they are quite innocuous, and occasionally their use is attended with immediate, or even permanent, relief. M. Dubois, however, maintains that in no instance do they ever attain their proposed object; the uterus is never replaced permanently in position by their use. This assertion he supports both on theoretical grounds, and by the result of his examination of cases treated by himself, by Valleix, and by Simpson. Although, however, the displacement is never removed by this method, the uterine symptoms may be alleviated or even cured by it. These results are owing to the pessary relieving the weight of the uterus, and the tension of its ligaments; to the alteration in the morbid action, by contact when the uterus is inflamed, and to the alteration of its morbid sensibility in cases of neuralgia. In the latter class of cases, the method is of particular service, and often relieves all the symptoms, even where no deviation had existed. Many of M. Valleix's cures occured in cases of neuralgia. Consequently, the intra-uterine pessaries ought to be retained in practice, not as directors of the position of the uterus, but as modifying agents which may be placed in competition with other efficacious means already known as such, cauterizations, douches, etc. And in all cases, the general treatment should be attended to as well as the local, a principal condition to which M. Valleix owes much of his success.

M. Cazeaux expressed his opinions at great length. He objected to the report for stating the unfortunate and fatal cases, and omitting the successful ones. He admitted that by removing the displacements, both the symptoms which it occasions, and even the concomitant lesions, granulations, etc., may be cured. In opposition to M. Dubois, he maintained the efficacy of the (M. Chégoin's) vaginal pessaries in retroversion ; and he considered inflexion to be a congenital condition in the child, adopting the opinion of M. Boullard, Follin, and Verneuil. He is opposed to the intra-utarine pessary, as mostly useless and often dangerous, but he considered that the uterine sound, with proper precautions, may be rendered safe, and is of real service.

M. Gibert maintained that too much importance had been attached to uterine diseases altogether, and great illusions existed in regard to them ; that they often depended on constitutional states ; and he mentioned instances of several diseases of the uterus, where erroneous and overstrained views of their pathological consequences had led to methods of treatment as severe and dangerous as they were useless and uncalled for.

M. Velpeau, in one of the most important addresses delivered in the discussion, entered at considerable length into the details of the question, and opposed, in decided terms, the conclusions of M. Dupaul's report. He passed a high eulogium on M. Valleix, and attached great importance to the results of his practice. He maintained that practitioners have not exaggerated the effects of uterine displacements, nor have they attributed to them those affections which resulted from other pathological conditions. Wherever disease of the uterus, enlargement or engorgement (if not mistaken for anteflexion, as has often happened), or ulceration, or lucorrhœa occurred, no practitioners could overlook these conditions, or confound them with the effects of simple uterine displacement. And, although there may be cases of uterine displacement, without urgent symptoms, just as there is hardly any important organic disease the symptoms of which may not be latent, still no one could doubt the serious affections which may be caused solely by uterine displacements, and may be removed by replacing the uterus. M. Velpeau was convinced that, although these deviations yielded, in general, a favorable prognosis, yet that they produced, especially in nervous women, affections of real danger. M. Velpeau next examined the means of remedying these affections, enumerated by M. Depaul and others ; and, while recognizing their usefulness in certain cases, he was quite persuaded of their radical inefficiency. In consequence of this conviction, he had himself long ago attempted the use of intra-uterine pessaries, but had desisted after a trial of a few months, being deterred more by theoretical considerations than by the results of practice. He now thought that the dangers of these pessaries had been exaggerated, and might be avoided by more careful and experienced manipulation. The intra-uterine pessaries had not indeed solved the difficulties in the radical treatment of uterine displacements, but they had already rendered great services, and would, with further experience, render more; they ought not to be rejected, but their employment ought to be regulated judiciously; and he trusted to the experience of M. Valleix to disclose the advantages and the disadvantages which belonged to this method of treatment. M. Velpeau was of the opinion that the conclusions of the report ought to be suppressed, and that the Academy could only vote in reference to the cases brought forward by MM. Broca and Cruveilhier.

M. Depaul explained that the conclusions already given were merely the summing up of his report, and that he would, after the discussion was finished, submit to the Academy a series of conclusions embodying the unanimous opinion of the committee.

M. Amussat said that the idea of introducing bougies (*tiges*) within the cavity of the uterus, first suggested itself to him in 1826, on seeing M. Recamier use the uterine sound for diagnostic purposes. Among the first cases in which he used the pessary was that of a woman with anteversion; he introduced a pessary with an ivory stem into the uterus, and allowed the patient to go about with the instrument *in situ*. Inflammation supervened, and the patient died. Deeply grieved in consequence of this mishap, he tried to remedy all displacements by extra-uterine instruments. He employed for this purpose conical pessaries, which resembled ivory cupping-glasses; but these were found productive of so much pain, that he had to abandon their use. For thirty years he had used both intra and extra-uterine instruments. (Here M. Amussat exhibited to the members of the Academy his various instruments—some made of ivory and steel, and others of india-rubber, elastic gum, etc.) He was discouraged, however, by the general results of instrumental treatment. He had heard of many spontaneous cures of uterine displacemements, resulting from local inflamations and ulcerations having produced adhesions between the uterus and vagina, and this led him to imitate nature, and to attempt their cure by gently cauterizing the posterior part of the cervix, that by the adhesions formed by the cicatrization of the sore, the displacements might be radically and permanently cured. The successful results of this mode of treatment had far surpassed his anticipations. Relaxation of the vagina and procidentia of the uterus often rendered the application of the caustic somewhat difficult; but by putting the fingers into the rectum, and simultaneously using the sound, the position of the uterus could be sufficiently maintained during its application, and by a pessary thereafter. He related several successful cases illustrative of this mode of treatment in cases of retroversion. He had not found cauterization in the anterior lip of the cervix to be beneficial in anteversion. In such cases he used a cup-shaped pessary (*en goblet*), to support the uterus. In conclusion, he believed the indiscriminate use of pessaries for the cure of displacements to be prejudicial; he considered the employment of intra-uterine instruments as dangerous in some instances, and as productive of merely temporory benafit in the great majority of cases; but he characterized his own method of treatment as free from all danger, and as permanent in its results—except after pregnancy.

M. Malgaigne again spoke at great length. He agreed with M. Hervez de Chègoin, in considering that uterine displacements occasioned great pain, and also engorgement, and that these disappeared after the replacement of the organ. But he affirmed that it was impossible to recognize engorgements of the uterus apart from, and independent of, displacements. He commented, with some severity, on the statements made by Gibert, in which that gentleman had underrated the importance of uterine affections, and attributed their symptoms to general pathological conditions of the system. Referring to what had been said by M. Dubois, he alleged that neuralgia of the uterus did not appear to be a very common complaint, for although he *had* seen cases of it, they were very few in number: but he bowed deferentially to the experience of Dubois. He maintained that the pain occasioned by pure displacements of the uterus was removable by mechanical means; and that the recumbent posture caused its cessation. This circumstance he regarded as pathognomonic of the affection. He looked upon the speculum as of little use in the diagnosis of displacements, as he had known such cases, when examined by means of it, diagnosed as ulcerations of the cervix, and treated needlessly with cauterants. M. Huguier had alleged that displacements, when trifling in amount, occasioned no pain, but herein he was in error. The suffering occasioned by displacements was by no means regulated by their extent, but solely by the special susceptibility of the patients in whom they occurred. Great prolapsus might occasion no pain, while trifling deviations of position might be quite intolerable. M. Cazeaux had said: "Congenital inflexions are seldom the cause of pain, while those occurring accidentally are always the source of suffering, which is sometimes very acute." He asked M. Cazeaux for some proof of the existence of congenital inflexions, and by what means he distinguished them from others. He could conceive of no way except saying to the patient: "Madam, have you had this inflexion from your birth?" After passing a high compliment on M. Valpeau, he made some remarks on certain portions of his address. Valpeau had stated his belief that the displacements occasioned pain in the round and broad ligaments, which he said were filled with nervous filaments derived from the great sympathetic, and continuous with the mesenteric nerves. This doctrine Malgaigne condemned as unphysiological. He did not agree with Velpeau in thinking that "no experienced practitioners could overlook these conditions." The present discussion was the best proof of the possibility of such mistakes. As to the hypogastric belt, which had been originated and greatly used by Velpeau, he affirmed that it could always be borne by patients who had simply uncomplicated displacements; and that where it was not borne well at first, it seldom was so even after usage for some time. *Can uterine displacements be replaced?* Undoubtedly, for he had seen three cases of retroflexion cured spontaneously. There was no difficulty in the replacement of so mobile an organ; and in ordinary cases, where there were no adhesions, the instrument, when introduced into it, replaced it instantaneously, and without any effort. He could not see the advantage to be gained by allowing the instrument to remain (as proposed by Simpson, Valleix, and others) within the uterus, for days, weeks, or months. What was the purpose of this? To give tonicity to the ligaments? They were not placed in their normal direction. If it was in order to allow the intestines (which were normally interposed between the uterus and the rectum, and keep it *in situ*) time to slip behind the organ again, it was unnecessary, as this was the work of a moment. He was of opinion that the instrument for replacing the uterus should not be allowed to remain within it more than a few minutes at the utmost. *When the uterus is replaced, can we maintain it permanently so?* That was much less probable, for the organ having once been displaced, was very prone to become so again. He believed that some complete recoveries had been effected, but that in no case was a cure certain. Seeing, then, that a cure was so very uncertain, and palliation alone could be hoped for, he considered it was neither prudent nor reasonable that we should subject our patients to the risk of danger and death. He concluded thus: "I have only one word more to add, and that is this: If, unfortunately, I had to treat my wife or my daughter for a uterine displacement, I should not choose the more dangerous of two palliative measures, and most assuredly, I should not subject them to the use of the intra-uterine instrument."

M. Ricord desired to make a few remarks on the treatment of certain hyperæsthetic conditions of the cervix and vagina, which were sometimes consequences or complications of various displacements of the uterus, with or without some other morbid condition. There were many cases of displacement where the pain was alleviated or removed by lying in a certain position. He considered that much of M. Velix's success was due to his displacing and isolating the uterus from its painful position, without making pressure (*sans prendre un point d'appui*) on the sensitive hyperæsthetic parts. For a serious case of this nature, in which all the resources of therapeutics had failed in the ablest hands, and in which *considerable benefit* had been derived from the use of M. Valleix's instrument—he had invented a new instrument, whereby the uterus was isolated, supported and maintained in a suitable position, without the instrument entering the cavity of the womb, or touching the vagina. Its use was quite painless and free from bad consequences in cases where the cerevix could be touched by an instrument or by the finger of the accoucheur. This instrument consisted of a forceps, which was introduced by the aid of a speculum, and the points of which seized the cervix. By means of a ring, moved by a screw, the uterus could be raised to any desired height; and the whole apparatus was fixed by means of the plate (*plastron*) of M. Valleix's instrument. In conclusion, he considered, with MM. Paul Dubois and Velpeau, as well as with M. Huguier and with M. Malgaigne in his first speech, that the mode of treatment practiced by Simpson and Valleix was productive of great benefit, when applied to cases requiring it, and that consequently it should not be rejected from practice.

M. Robert said he rose with some hesitation to address the Academy, but having been a member of the commission for whom M. Depaul acted as reporter, he considered it right to state wherein he differed in opinion from M. Depaul. He did not, with M. Depaul, consider that the influence exercised by uterine displacement on the health of females, had been at all exaggerated. In his opinion, there existed two classes of deviations—the one comprising such as were primitive, and resulted from accidental and occasional causes; the other, such as were secondary, occasioned by different lesions of the uterus, more especially of the body of the organ. The former class of cases were observed to occur thus: "A woman in good health makes a sudden or violent effort, or falls on the breach; she feels at the time a crack and a painful sensation in the lower part of the abdomen. From this time she suffers more or less pain; menstruation becomes deranged, and is either too scanty or too profuse. She consults us, and we find retroversion; the uterus is painful, tumefield, etc." He observed that such cases should not be neglected, as they did not always remain uncomplicated, and functional disorders, as well as organic lesions, were liable to result from them. The latter class of cases followed chronic metritis, uterine catarrh, and inflammation of the cellular tissues surrounding the uterus. They occurred after protracted labours, and especially after miscarriages; and were observed in females of lymphatic temperament, in whom uterine congestion occurred without signs of phlegmasia. The fundus of the uterus was generally at fault in these cases, and was often so voluminous and heavy that it swayed backwards and forwards. In retroversion, suffering resulted from the interrupted circulation in the uterus, from the obstruction offered to the passage of feces, and from the pressure of the organ on the sacral nerves. He expressed astonishment at what had been said by Depaul and Velpeau as to the ease with which displacements might be diagnosed. He had studied diseases of the uterus carefully during the twenty years which he had been surgeon to the Hôpital be Lourcine, and he still often found great difficulty in diagnosing displacements. He considered the pathognomonic sign of displacements adduced by Velpeau and Malgaigne, viz: freedom from pain in the recumbent posture and return of uneasiness on rising—applicable only to cases of anteversion complicated with procedentia (*abaissement*), and not to retroversion.

He had for a long time been in the habit of introducing dilating bougies into the cavity of the uterus, and never saw any bad effects; and he had also tried to replace the organ by means of an instrument like that shown by M. Velpeau, but without success. He also employed Simpson's pessary. He first used it in case of retroversion which had resisted all other treatment. No evil result occurred during its use, but, on the contrary, the catamenia, which had been absent more than three months, returned in normal quantity on the fourth day after its application. It was worn for a period of six weeks, and during this time, a second menstrual epoch occurred, without any pain or inconvenience. At the end of the six weeks, it was withdrawn, and he then found that the uterus had regained its normal position. The retroversion returned, however, and the pessary was again introduced. The patient left the hospital, and went about in Paris for ten or twelve days without experiencing any pain; but feeling it uneasy after that time, she applied for its removal. Since then he had never seen her. He used Simpson's instrument in a second case of retroversion, but as it induced a continual discharge of blood, he was obliged to withdraw it on the tenth day. In a third case of retroversion, occurring in a woman of sanguine and irritable constitution, he used this pessary. He had to withdraw it, however, at the end of three hours, inasmuch as it caused severe uterine pains, accompanied by vomiting. He tried it again three times, at intervals of several days, but without success. He had, therefore, abandoned the use of the instrument. Although injurious results had followed the use of this instrument, he admitted that it was proved by incontestible facts, that in very many cases, where all other measures had failed, this mode of treatment had been productive of complete and lasting success. He thought that it would be premature to exclude this instrument from practice, but he considered it very desirable that its mode of action was better understood, and above all, that we knew accurately all its indications and counterindications. This knowledge would render its employment more efficacious, and would diminish the number of accidents resulting from its use.

M. Depaul then replied at great length, and maintained that his report had been impartially prepared. M. Huguier had said that intra-uterine pessaries should be used "in those exceptional cases of displacement, giving rise to serious symptoms, which resist other means of treatment." If displacements occasioning severe symptoms were rare, how much more so must be those cases which resisted treatment? He could fearlessly affirm that such cases were hardly to be met with during the course of a long career. As regarded the use of pessaries for emmenagogue purposes, he could say that cases of amenorrhœa affecting the life and health of women were very rare, and that those which resisted ordinary medical treatment were still more exceptional. He believed that the sanguineous discharge provoked by the introduction of these instruments was *not* the catamenial fluid, but a true uterine hemorrhage, which had been mistaken for menstruation. As to the influence of displacements upon the health, he believed that statistics, collected from a number of rigorously observed cases, were necessary to set the question at rest. He still remained convinced that there was great exaggeration in the opinions of the partisans of mechanical replacement; and he thought that he had proved this from their own observations. He had never denied that displacements or flexions might occasion sterility, and he believed this to be due to an alteration both of structure and of form. Were uterine displacements incurable? No one had affirmed this absolutely. There were a great many displacements, especially congenital inflexions, which resisted all treatment, but there were others which were easily removed. The first question he always asked himself when called to treat such cases, was: "Is the tissue of the organ sound?" If not, he tried to remedy the disease before the displacement. He did not mean absolutely to assert that uterine displacements were of no consequence, or that they caused no accidents. He had seen enough of these diseases to know that it was not so. He agreed with M. Hervez de Chégoin that many displacements resulted from diseases of the uterus, but he did not consider, with him, that cases of uncomplicated displacement, producing distressing symptoms, were at all common; he believed them to be very rare, but he did not deny their existence. It was far more usual to find displacements — flexions and versions — existing to a considerable extent, without in the least affecting the health, or leading the women in whom they occurred to suspect their existence. As regarded the introduction of the intra-uterine pessaries, he might mention that M. Michon had not only abandoned their use, but had expressed scruples about introducing foreign bodies even into the cervix, inasmuch as he had seen peri-uterine inflammation and the formation of abscesses follow the introduction of a hollow sound. He agreed with the principles of treatment laid down by M. de Chégoin, and considered that mechanical treatment should never be resorted to until all other pathological conditions, existing simultaneously, had been removed; that we should not confine our attention *solely* to the local affection, but by all suitable means endeavor to remedy the general health, and those derangements of innervation, nutrition, and circulation, which are so common in such cases. He believed further that, in certain cases, it might be advantageous to associate with the local treatment of some uterine affections, the use of mechanical means, which by fixing (*immobilisant*) the organ without irritating it, might aid in removing chronic inflammations, of a partial or general character. He protested against the injustice of M. Cazeaux's accusation of having quoted only the unfortunate, and suppressed all the useful cases; he had drawn his data from all the cases he was cognizant of; and he knew of no really successful ones. He appealed to the statistics of M. Gosselin which he had quoted, for the truth of his assertion, that many uterine affections — even the most serious — might exist without giving rise to any uneasy symptoms. Displacement was a simple unimportant deformity. M. Cazeaux had alluded to catarrhs, granulations, ulcerations, neuralgias, etc., coëxisting with displacements. In such cases these lesions should be attacked before the displacements; and in sixty cases he had treated on this principle there were only three in which any bad symptoms remained after two or three months. He advanced a series of arguments and statistics, at great length, to prove the fallacy of the assertion—made originally by MM. Boulard and Verneuil, and quoted in the speech of M. Cazeaux — that anteversion was the normal condition of the uterus in children and women who had never borne children. He had shown by his researches that intestinal expansion, in the dead body, might raise up the organ, and so deceive observers. But he admitted that there was a *predisposition to anteversion* at all periods of life. He regretted that M. Cazeaux had not stated, for the enlightenment of MM. Huguier, Valleix, Nonant, and others, the "proper precautions" which rendered uterine catheterism safe. He did not deny the usefulness of the uterine sound (*hystéromètre*); he considered that it was wrong to make the use of it general, and thought its employment should be confined to the *few* cases in which it was indispensable. With considerable asperity, Depaul next attacked the assertion which had been made by Cazeaux, that there was no such thing as inflammation of the tissue proper of the uterus; and he quoted cases and authorities to disprove it. He alluded to the statement made by M. Dubois, that the uterus was never permanently replaced by the use of instruments, and asked if, in the event of this statement being true, it did not militate against the use of intra-uterine pessaries. After the cases cited by M. Dubois and himself, he thought there could be no doubt of the fact that these instruments were useless. (*"Les redresseurs ne redressent pas."*) He believed that a modified form of the pessary might, perhaps, as Dubois said, relieve uterine neuralgia; but he did not hesitate to express his opinion, that the evil results and fatal cases caused by the intra-uterine pessary ought to exclude it from use in the treatment of all serious uterine phlegmasiæ. He next alluded to M. Malgaigne's speech, and considered as very inconclusive and unsatisfactory the test he gave for the diagnosis of displacements, viz: cessation of pain on assuming the horizontal posture. He also objected to Malgaigne's detestation of the speculum, and of vaginal examination in such cases. He had accepted an invitation from M. Malgaigne, on the 2d July, to go to the Hôpital St. Louis, to see two cases there which had been cured by M.'s hypogastric belt. They were said by Malgaigne to be cases of simple displacement—the one a case of anteversion, the other of retroversion. On examining the patients manually and by means the speculum, he found considerable ulceration of the cervix to be present in both cases; in the first there existed, in addition, slight anteversion and considerable prolapsus, in the other there was no displacement whatever. He agreed with all that had been said by his learned master, M. Velpeau, in praise of the high scientific character and general probity of M. Valleix; but he dissented from the opinions expressed by Velpeau as to his practice. If Valleix had had cases proving the successful use of intra-uterine instruments, he was astonished that he had not published them. Velpeau had attributed most of the evil results of pessaries to errors of practice and diagnosis, and to want of expertness and ease in manipulation. He could not see wherein lay the difficulty of introducing a bougie into the uterine cavity, and could not imagine practitioners like MM. Valleix, Nélaton, Huguier, Aran, etc. being deficient in proper precautions or expertness. What always astonished him was that the uterus should be so tolerant of instrumental interference, when it was recollected how easily it was irritated by the presence of a small foreign body, and how the presence of a simple clot or polypus within its cavity induced violent contractions of it, which only ceased when the offending substance was expelled. There was a great difference between these foreign bodies and an intra-uterine pessary formed of solid, inflexible material. It was said that the end of the stalk should not touch the fundus uteri; but it was forgotten that this organ had, properly speaking, *no* cavity; and, however short might be the instrument introduced, it acted on the organ by all the parts of its surface, and especially by its point, against which the uterus was continually being impinged, either by its own inherent force of contractility, or by impulsions given to the organ by muscular movements and the pressure of the intestines. M. Velpeaux had concluded his speech by expressing a hope that M. Valleix would decide the question as to whether these instruments should or should not be used. M. Valleix had already done so; but his opinions were dangerous, and therefore he (M. Depaul) could not accept them. He concluded by laying before the Academy the following conclusions made in the name of the commission, and carried by a majority, with the exception of the third, in which M. Depaul said he was at variance with his colleagues: —

1. The cases reported to the Academy by MM. Broca and Cruveilhier, along with numerous others on record, prove that the use of the intra-uterine pessary may often occasion serious accidents, and sometimes even death.

2. In the rare cases in which this instrument has appeared productive of advantageous results, it is not proved that it had always acted by replacing the uterus.

3. In some exceptional cases where uterine displacements (*déviations*) have occasioned serious functional derangements, and where all known therapeutic measures have been tried in vain, the application of the intra-uterine pessary may be tried as a last resource.

4. The commission has the honor to propose a vote of thanks to M. Broca, for his his very interesting communication which has originated the late debates; and also to M. Cruveilhier.

The President put the first conclusion to the vote.

M. Velpeau.—This conclusion appears to me to have been adopted; but it is too severe. Instead of saying " the use of the intra-uterine pessary may *often*," I would substitute the words, "may *sometimes* occasion," etc.

The President.—It is proposed to suppress the adverbs altogether. It should be read: "The use of the pessary *may* occasion," etc.

The President then put the first conclusion to the vote, with the word "*often*" suppressed. It was adopted in this modified form.

The *second* conclusion was carried unanimously, without any modification.

The *third* conclusion was then read, and M. Gibert demanded its suppression.

M. Velpeau.—I insist on its being allowed to remain.

M. Cazeaux. I am convinced that the use of the intra-uterine pessary is always useless and sometimes dangerous. I cannot adopt this conclusion.

The President. — It contains the words: "As a last resource." For this purpose we may try any thing. [Laughter.]

Several members proposed the suppression of the conclusion, and the President proposed to put it to the vote.

M. Jobert requested the suppression of the words "as a last resource" (*comme dernière ressource*).

M. Velpeau supported this amendment.

The conclusion thus modified was put to the vote and rejected.—*Monthly Journal Medical Sciences*, Aug. and Sept. 1854.

ART. II.—*Parasian Medical News. Communicated to the Editor of the American Journal*, from E. WARREN, M. D.

M. Bernard has been making a number of experiments in regard to the secretion of sugar by the liver. In a recent lecture, he took a dog which had eaten nothing for four days, and examined the blood of the vena porta and sub-hepatic veins. In the first he found no sugar at all, but in the other he discovered that substance in considerable quantity. From these facts, he drew the necessary inference that the faculty which the liver possesses of forming sugar exists when no aliment has been taken into the system. He affirmed, in this connection, that this creative power of the liver was not at all destroyed in animals who had fasted even for eighteen days.

He took another dog, the pneumogastric nerve of which had been cut twenty-four hours before, and, after making an examination of his blood, demonstrated that it contained no sugar at all. He found none of that material in the hepatic veins, and scarcely a trace of it in the liver itself. He said that if the dog were examined at the expiration of forty-eight hours not a particle of sugar could be detected in that organ; from which he concluded that by arresting the action of the nerves which preside over the functions of the liver, its power of forming sugar was entirely destroyed. He then laid down the general law, that "all the secreting organs are directly under the influence of the nerves, and that their secreting powers may be increased or diminished by exciting or depressing the nervous system."

In illustration of the proposition, he proceeded to show that he could at pleasure either increase the amount of sugar secreted, lessen or arrest this peculiar function of the liver, or force that organ to produce a different substance, which might subsequently be transformed into sugar.

1. As a means of demonstrating his ability to increase the amount of sugar, he took a rabbit, and punctured its medulla oblongata, at a point situated between the origins of the acoustic and pneumogastric nerves. He then affirmed that in an hour the rabbit would be diabetic, in consequence of the irritation of the nerves thus produced. At the end of that time he made an examination of the urine of the animal, in the presence of the whole class, and found that sugar presented itself in considerable quantity in that secretion. He accounted for the existence of sugar in the urine by the fact that the liver is the great reservoir of sugar in the economy, and that when the quantity of that substance is increased in this organ, the blood becomes saturated with it, and the urinary secretion is impregnated as a necessary consequence. He said that he had made many experiments for the purpose of ascertaining whether the kidneys themselves are capable of secreting sugar, and to settle the question of its transmission outwards by other passages. The result of his researches was a conviction that, like everything else excreted from the economy, it manifested a certain preference in its selection of organs of elimination and channels of escape. For his experiments in this direction, he had employed: 1, different kinds of sugar; 2, iodide of potassium; and, 3, prussiate of potash, as the substances most easily recognized in liquids. When these materials are taken into the system, all correct observation proves that they are found in certain secretions and not in others.

Sugar finds its way out by two passages: 1. By the kidneys; 2. By the gastric juice. Never mind how great the quantity of sugar injected in the veins, it does not make its exit from the body by saliva, the pancreatic juice, the tears, or the bile, but always selects the urine and gastric juice as the vehicles of its passage. M. Bernard had often examined the saliva of persons affected with diabetes at La Charitè, and had never been able to find in it a trace of sugar. He accounted for the "sweet taste," in the mouths of such persons by saying that the sugar which circulated in the blood came in contact with the gustatory nerves, and produced the sensation. As an evidence of this, he stated that Magendie had found that, when bitter substances had been injected into the veins, a disagreeable taste was immediately produced in the mouth. He also explained satisfactorily why certain observers had found sugar in the expectorations of persons affected simultaneously with diabetic and pulmonary disease. He said that the sputa of such persons differed materially from ordinary saliva; the one being the mucus produced in the bronchial tubes; the other, the secretion from the salivary glands of the mouth. The first, when analyzed, sometimes gave a slight saccharine reaction; the second was always entirely free from the slightest trace of sugar. As a means of showing that substances introduced into the economy are not eliminated indiscriminately by all the secretions, he performed the following experiment:—

He took a dog, into whose partotid gland he had previously introduced a small metallic tube, and injected his jugular vein with a liquid composed of a mixture of sugar, iodide of potassium, and prussiate of potash. After waiting a short time, he procured a quantity of saliva and urine and subjected them to certain chemical tests. The iodide of potash alone presented itself in the salivary secretion, whilst all three of the substances were found in the urine.

Mr. Bernard believes that the presence of sugar in the gastric juice had deceived and misled many observers. The liver and not the stomach, is the great sugar generator. The fact that wine in the stomach of diabetic persons becomes sweet after the lapse of a certain time, does not prove to the contrary in the least degree, as has been supposed by Mr. McGregor and others. The gastric juice, which is impregnated with sugar, mixes with the wine, and imparts a sacharine taste to it. The gastric juice also allows the passage of the prussiate of potash. as can easily be established in the following manner: Let some aliment containing iron be passed into the stomach, and a preparation of prussiate of *potash* injected into the veins. Then an examination of the contents of the stomach will show that the prussiate of *iron* has been deposited among them.

These experiments, with their explanations, and the deductions from them, constituted the substance matter of one of the most interesting lectures delivered by M. Bernard since the opening of his present course. He is not a fine speaker, but he is undoubtedly the most successful experimenter, and the first practical physiologist in the world. His rooms are always crowded with students, both French and foreign, and he never fails to interest and instruct all who give him their attention.

M. Bourguignon, who has distinguished himself by many observations and investigations in regard to the subject of entomology, read an interesting paper before the Academy, at its last sitting, upon the itch of different animals. It had been generally believed that in each animal this disease was peculiar, and transmissible only to one of the same species. The acarus of man had been deposited upon dogs, cats, rabbits, birds, &c., without reproducing itself, or communicating the itch to those animals. And, on the other hand, the acari of horses, sheep, &c., when placed under the skin of certain medical students, and surrounded by all the circumstances most favorable to their germination, had died almost instantaneously. M. Bourguinon discovered, by means of the microscope, a remarkable resemblance between the acari of man and those of the lion, and immediately proceeded to test the susceptibility of the one to disease of the other. According to his account, the experiment was perfectly satisfactory, and it is now an established fact that an analogy exists in this particular between the king of the forest and the lord of creation. Thus has a most important service been rendered to pathology in general, and dermatology in particular, by the much abused and *fallacious* microscrope.

A new remedy has recently been discovered for mercurial stomatitis, which is likely to prove a most valuable therapeutical agent. It is well known that many experiments have been made for the purpose of ascertaining what chemical changes can be effected in mercury taken into the system, so as to render it harmless in its effects, and to make its elimination expeditious and easy. For the purpose of disengaging it from its combinations with albumen, restoring its natural solubility, and facilitating its exit from the economy, many different substances have been administered, as the acetate of lead, preparations of sulphur, the sulphite of soda, &c. All who have had any experience in the practice of medicine, know that these remedies are not sufficiently certain and efficient in their effects to elicit much faith in their potency when the mercurial poison has really taken possession of the system. According to the experience of Messrs. Herpin and Blanch, of Geneva, the chlorate of potash, administered internally, answers the ends which have so long occupied the attention of the profession, and fulfills all the indications present in a case of mercurial stomatitis. They report a number of cases in which this remedy effected cures with marvelous certainty and rapidity. They say that it is equally sure in its effects upon adults and children, and that in every particular it is worthy the confidence and respect of the profession. It is administered in doses of 15 to 30 grains dissolved in a solution of gum acacia and water, or some other vehicle of the same description. The whole quantity is taken in the space of twenty-four hours, if the urgency of the case demands it. The dose for children is, of course, smaller, following, in fact, the general rule established for other medicines.

An animated discussion came off at the last meeting of the Academy, between M. Bousquet and M. Piorry, in regard to the specific nature of disease. The latter read a long paper before the Society, in which he took strong grounds against the nomenclature now employed by medical men, for the reason that it is based upon mistaken ideas of disease itself. He attempted to demonstrate an absolute non-identity between diseases, and to show that they are separable into a certain number of distinct organic morbid conditions. In fact, he seemed to look upon man, in his relation to pathology, as nothing more than the juxtaposition of a certain number of organs and members, between which there is no distinct and necessary connection or sympathy.

This called up M. Bousquet, who made an animated and able reply. He attacked the foundation of M. Piorry's argument, by showing that an intimate and necessary connection existed between the different component parts of the system, and the maladies which pertain to them. He ridiculed the changes proposed in the nomenclature of medicine as absurd and unnecessary in every particular, innovations which the necessities of science did not in the least degree demand. Unfortunately, however, he went too far. He declared that he placed the causes of all maladies in the source of life itself; that he was a *vitalist* in the fullest force of that term. This doctrine is more dangerous than the other, since it condemns therapeutics to an absolute sterility, closes the door against all further research in medicine, and prevents the advance of the profession in its most important and practical direction. To place the root of all diseases in "vital action" is to transfer it to a *terra incognita*, which mortal ken cannot penetrate or explore.

A French journal, in giving an account of the discussion, closes its remarks with the following expressive exclamation, "O, vitalism! how many faults have been committed in thy name!" There is certainly much truth as well as force in the expression, and it should be inscribed upon the tombs of the advocates of this peculiar doctrine, as a warning to their followers.

M. Dubois has performed the Cæsarean operation twice within the last two months, without saving the mother in either case. After the last operation, he delivered a very interesting lecture to the class, giving his reasons in full for resorting to so extreme a meas- and stating the principles upon which he had acted under such circumstances during his life. He said that the inferior strait was too small to allow the passage of the child, either living or dead; that he knew the child was alive, and that experience demonstrated the *possibility* of saving the mother after the operation. In this state of the case, he had no alternative but to resort to the Cæsarean section. As a general rule, he preferred cephalotripsy to the Cæsarean operation, for the reason that it was better to sacrifice a child which had formed no ties in the world than a woman who had already many complicated relations with society. He considered the question between the two operations to be one for the conscience of each individual physician, and about which no general rules could be established. He said that, among the poor, the chances for the lfe of a motherless child were very slight, and that as experience showed that the *probabilities* were against saving the woman after the Cæsarean section, it was his practice, particularly in hospitals, to perform cephalotripsy instead of the other operation. One could hardly have supposed that views so sensible and just would have met with any opposition. They have, however, been warmly combatted, in a recent number of the *Gazette des Hôpitaux*, by Dr. Liégard. He thinks that it is a question for science, not for conscience. He believes that the experience of the past has established a rule on the subject, which should be universal in its application. He declares it to be the duty of the physician to save the child, without taking into the account the right of either to life. He considers it better to sacrifice the mother, who has been *baptised*, than the child to whom circumstances have denied that *inestimable* right. These are his views on the subject, and I am afraid that they are entertained by too many physicians of France. There is no telling to what extremeties of folly blind superstition may drive even the most intelligent men, and when this *holy fear* of sacrificing both the *soul* and *body* if the child comes in to warp the judgment of the profession, it is to be apprehended that the learned professor may find himself in a small minority. Dr. Liégard gave some valuable statistics on the subject, which I will repeat.

Sounias, a physician of Bruges, reports that his own wife had submitted seven times to the Cæsarean section.

Simon has collected sixty instances in which the women had survived this operation. Tenon had reported seventy cases at Hôtel Dieu, which had presented themselves since those previously noticed by Caspar Bauhin, at the end of the 17th century; and Michel and Weideman have reported many successful cases.

Baudelocque, out of 111 Cæsarean operations, saved 48 patients.

In my next letter, I will report the progress of this discussion, as well as give a general sketch of the progress of medicine in Paris.

Paris, *March*, 1855.

ART. III.—*Lecture on the Modes of Death and the Therapeutics in Diseases of the Spinal System.* By MARSHALL HALL.

GENTLEMEN: In my lecture of yesterday, I explained to you *two* modes in which spinal seizures may issue in death: the first, by apoplexy of the medulla obologata and paralysis of the pneumogastric nerve; the second, by shock on the heart; the former, somewhat slowly—the latter, suddenly.

There is another mode of death in epilepsy. It is the result of sheer nervous exhaustion, from the rapid or constant repetition of severe paroxysms.

This subject will be best illustrated by an experiment:

I divided the cerebral from the spinal centre in this frog, and then dropped on its surface a few drops of a solution of the acetate of strychnine. It has become affected by the poison: the least touch, the least jar of the table throws it into a tetanoid paroxysm.

If I avoid excitement, the animal survives in its state of strychnism for a long time. But if I continue to repeat the excitation, the excitability and life soon become extinct.

I will suppose the frog without injury, but placed under the influence of strychnia; if it be secured from all excitation, it recovers; if it be exposed to repeated excitation, it dies.

So it is in the dog.

Even in tetanus in the human subject, I believe some patients would recover if preserved absolutely from excitation, who die under its exhausting influence.

The same event occurs in epilepsy. In a case detailed in the Lancet by Dr. Bucknill, in which tracheotomy had been performed, and in which, therefore, laryngismus had lost all its baneful influence, the patient died of pure exhaustion, "distinctly not of coma."

Death from nervous exhaustion must therefore be added to the other forms and modes of death in epilepsy.

There is still another source of danger and of death in epilepsy. It arises out of trachelismus assuming the form of torticollis, and attended with twisting of the body.

Some time ago a medical student, affected with epilepsy, called on me, and whilst we engaged in conversation, uttered a fearful cry, became affected with twisting of the neck and body, and would have fallen had I not held him forcibly on his chair.

The next morning he was found dead in bed, with his face buried in his pillow!

He had doubtless had a fit in the night, which, assuming the form I had observed and have described, turned him in bed.

In this manner a patient has been suffocated in a fit of epilepsy, the face being found literally buried in the soft soil of a newly-ploughed field, or submerged in shallow water.

Such, then, are the principal modes of death in epilepsy. Another topic which I must discuss briefly before I enter on the subject of the therapeutics of the spinal system, is, the mode and degree of recovery from attacks of epileptic or convulsive affection.

An epileptic fit probably ceases frequently from nervous exhaustion of the spinal centre, just as we observe the tetanoid spasm cease in the frog affected with strychnia.

From this exhaustion reaction usually takes place, and the spinal centre passes into a state of undue excitability, just as re-action follows repeated attacks of syncope in cases of loss of blood, passing into excess.

In this condition of excessive excitability, the slighter causes of the epileptic seizure are usually but too operative. It constitutes indeed, the continued *predisposing* cause of epilepsy.

This undue excitability of the spinal centre is by no means incompatible with a shattered condition of the general system; and therefore we frequently observe the epileptic patient pale, thin and feeble, though in other cases there are a florid complexion, a robust form, and much muscular power.

Besides the spinal centre, the cerebral centre is apt to be affected in severe epilepsy, and the patient is left comatose, maniacal, or with loss of memory or intellect. These events appear sometimes to depend entirely on intra-vasicular congestion, and sometimes on effusion, ecchymosis, softening, or other lesion.

You will not, gentlemen, be surprised, that from *any* mode of treatment we look for success, not in cases with organic lesion, or of inveterate standing, but in the comparatively recent cases of excentric inorganic origin, and still without organic change.

Now let us consider what may be accomplished in the treatment of epilepsy or other convulsive disease.

Once more I beg your attention to my Table. Look at this list of *causes*. The first part of our treatment depends on carefully avoiding all these.

The excitement, the irritation must be, as far as possible, avoided. The morbid condition of the blood must be remedied. A low posture and deep sleep must be carefully shunned. The neck must be cautiously guarded against a tight collar.

One event we must constantly suspect: an undue acidity in the stomach. Against this, the bicarbonate of potass is the present remedy, and should be taken on every recurrence of a threatening symptom. Many patients have carried about with them a solution of twenty-five grains of this bicarbonate in two ounces of water, and taken it in such circumstances with the greatest advantage.

Another event to be suspected is the formation and retention of scybala in the colon. These are only effectually removed by an enema of three pints warm water, slowly administered. But in this manner, too, the threatened attack has been averted.

One patient succeeded in replacing an attack by a fit of vomiting, taking for that purpose, on any threatening, half a drachm of ipecacuanha. To this I have sometimes *added* an equal quantity of the bicarbonate of potass.

The bowels should be kept well relieved daily; but I have known a dose of purgative medicine constantly to produce a seizure.

One patient took many remedies empirically. None did good. But the turpentine acted injuriously.

Of all our remedies none is more important than a well-regulated, simple, digestible, nutritious diet.

Against the undue excitability of the spinal centre in epilepsy, well-appointed walking exercise is the specific remedy. But *effort* or *fatigue* adds to the evil.

I think there is as the cause of sleep a latent trachelismus. The usual posture during sleep is the recumbent. Both these must conduce to the epileptic seizure. I have constantly recommended a posture during sleep at an angle of fifty degrees. And I think that I have seen advantage from gentle movements and noises in the patient's room during the first sleep, to prevent deep sleep.

All empirical remedies may be safely discarded. It is very improbable that *any* individual agent should be able to accomplish all that is required in a case of epilepsy. We may well ask, now that this malady is well understood, why epilepsy should be treated empirically more than apoplexy, or than infantile or puerperal convulsion?

It has appeared to me that the hyoscyamus may allay the nervous excitability so frequently observed in epilepsy. As a little spirit obviously does good in the undue cerebral excitement of delirium tremens, I have thought that minute doses of strychnia may be useful in the undue spinal excitability in epilepsy. For the organic changes induced by epilepsy, mercury is the remedy.

You will observe, in the Table, that after enumerating the remedies which I have briefly noticed, I have asked, is there any *specific* remedy in epilepsy? I am compelled to answer, No! And I must add, that the sooner the profession cease from this derogatory mode of prescription the better, and the more honorable. Zinc, copper, silver, valerian, the cotyledon, the sumbul, are all given in vain.

We must discard empiricism, and treat epilepsy as we do other diseases, on rational principles, tracing causes, effects, and, in a word, every link of the formidable chain, and act on science and common sense.

I must now, gentlemen, retrace my steps, and take up one of the topics which I have noticed briefly, and treat it at greater length. This topic is—*laryngismus*, and its remedy, and the remedy against its effects—*tracheotomy*.

I have already noticed the two kinds of laryngismus which occur in the first and last stages of a severe epileptic seizure, respectively—the *first* being *spasmodic ;* the *second, paralytic*.

The former frequently closes the larynx perfectly, and a *breath-struggle* is superadded, or there is simple suspension of respiration; the neck, face, eyes, become turgid and purple, the intra-cranial tissues being equally congested.

In proportion, in some degree, to this congestion is the damage inflicted on the cerebral faculties, coma, mania, dementia, being the melancholy effects—the lunatic asylum or the work-house the melancholy doom.

All these are averted by timely and efficient tracheotomy.

I would strongly urge you to seize some opportunity, during the period of your studies—for I am addressing myself to the younger part of my audience—to witness and write down accurately, the phenomena of the epileptic seizure. It is *not* in any or every kind of epilepsy that I recommend tracheotomy, but solely and exclusively in the *epilepsia laryngea*. It is *not* for epilepsy, but for *laryngismus*, that tracheotomy is proposed.

It is necessary to state this emphatically, for a feeble and malevolent critic has either misunderstood or misrepresented this matter.

We must begin, in the administration of this, as in that of all cases of important remedies, by a most careful and accurate *Diagnosis :*

1. The efficacy of the remedy is precisely proportionate to the degree of laryngismus and its effects;
2. The hope from the remedy is proportionate to the earliness of the period at which it is performed;
3. By the institution of this remedy, the *laryngeal* and most fearful form of the disease is *changed* into some milder or *abortive* form; or,
4. The seizures may cease, or decline and cease, altogether. The former was the happy result in the most interesting case of Mr. Cane.

There are many cases of epilepsy in which tracheotomy would be inappropriate. It would be inappropriate in cases involving *organic lesion,* original or induced, and in cases already become *inveterate.* It would be wrong to institute this operation in cases beyond *hope* of benefit; in the cases already deemed *incurable;* and therefore in most of the cases consigned to the lunatic asylum or the work-house. In these, all that we ought to expect from this, or any remedy, is some *mitigation* of so dire a calamity.

In the cases in which tracheotomy has been performed, this preliminary *diagnosis* has not always been instituted. The result has been precisely what ought to have been anticipated; yet it has been such, when duly weighed and considered, as to confirm and raise all my hopes from this important and heroic remedy in this Herculean malady. In some the fits have been mitigated a hundredfold; in several a failing intellect has been greatly *restored,* the occupation of the patient, necessarily relinquished, being resumed!

I proceed to notice the second or *paralytic* laryngismus. This is the result of a severe attack of epilepsy—always, I think, the epilepsia laryngea. The trachelismus, the laryngismus especially, the breath-struggles, have congested the cerebrum, and left a deep coma; with this, stertor or paralytic laryngismus has been combined—an event which *reacts* on the cerebral centre, augmenting the coma and the stertor. The patient is frequently seen to be in hourly jeopardy of his life from asphyxia. The countenance is livid, the viens of the neck distended, the integuments tumid. The respiration becomes more and more impaired and stertorous. A diffused bronchial rattle establishes itself.

The form of the asphyxia is, as I have already stated, twofold, laryngeal and bronchial; at first laryngeal, afterward both laryngeal and bronchial.

If tracheotomy be now efficiently instituted, the laryngismus is disarmed of its danger. The lividity of the countenance, the distention of the veins, the tumefaction of the integuments disappear *ā vue d'œil.* The respiration is free; the danger from *laryngeal* asphxia averted!

I need scarcely repeat, that if this tracheotomy be not only efficiently but timeously performed, the patient's life is saved. But if the operation be delayed, it will be performed too late: if the bronchia have become clogged and choked with mucus, it will assuredly be performed in vain. The patient, however, rescued from *laryngeal,* will succumb to *bronchial* asphyxia.

These observations do not relate to epileptic coma or apoplexy alone, but to *simple* apoplexy in all its forms; that so well described by Abercrombie, the apoplepxy of deep intoxication, of narcotic poisons, &c. It is the present remedy, and, if timely instituted, the effectual remedy, for the laryngeal asphyxia in all these cases!

Gentlemen, do not these views excite a deep interest in you? Examine them; judge them *for yourselves;* and be not misled by the ill-natured criticism of any superficial observer or thinker, who leaves *diagnosis* and every other just consideration neglected, and wonders that a fistula left by a cut-throat, is not a remedy for—laryngismus, and its effects? No! but—for epilepsy!

Having thus stated in *what* circumstances tracheotomy may be available in epilepsy, I will now beg your attention to that which I finally regard as the simplest, the safest, *mode* of performing it.

I present you with a pair of sissors, so ground at the point as to leave a notch, I propose that, having selected the point of the trachea at which the orifice should be made, you take up a fold of integument over it, and, by means of the scissors, make a vertical incision; that the scissors be now turned one-fourth round; that their points, brought together, be made to pierce the trachea, and then be separated, so as to *stretch* the tissues. and make an orifice of the proper extent.

The points of a little wire *cage,* such as I now show you, made of the proper size and strength, are then to be brought together, pressed into the orifice, and allowed to expand to the proper extent, in their turn; this being limited by a thread properly attached to it, and placed round it.

Not a minute of time, or a drop of blood has been lost, no danger has been incurred, and yet—the operation is performed!

The cage admits of being compressed, and easily removed, washed, and restored. No veil of viscid mucus will obstruct its aperture in any part, and the danger arising from such obstruction, hidden from observation, but detected by Dr. Edwards, will be effectually averted—a danger which I believe to have existed in many cases in which the ordinary *tube* has been long worn.

I will now, gentlemen, very briefly revert to the cases of epilepsy in which tracheotomy has been used. Mr. Cane's was the first, and the most splendid: life was immediately saved, and the fits were afterwards averted. Life was saved from a present danger in Dr. Herrick's and Dr. Williams' cases. The fits were reduced to a very mild and abortive form in Dr. Edward's and Dr. Bucknill's cases.

Every event occurs to encourage the *benevolent* inquirer.

There are other applications of tracheotomy.

The patient afflicted with hydrophobia has hitherto fallen a victim to *laryngeal asphyxia* and to *nervous exhaustion.* If tracheotomy were performed the instant the *diagnosis* was made, the patient would *not* die, as he has hitherto, of this laryngeal asphyxia. Query, would he necessarily die? If the patient were, further, protected absolutely, like the frog rendered tetanoid by strychnine, from causes of excitement, he *might not* die of nervous exhaustion. Query, is it possible that even the poison of hydrophobia may be, if life were prolonged, as by tracheotomy and security from excitation, eventually eliminated from the system, and life saved?

There is still greater hope of good from these measures in certain cases of *laryngeal* tetanus. My friend, Dr. Webster, once performed tracheotomy in a case of this kind. The benefit was so marked as only to lead to a regret that it had not been performed earlier.

You will find in a paper which I published in The Lancet about two years ago, a *list* of cases in which tracheotomy might be necessary. It is of considerable extent. It demonstrates the value of this remedy, and the importance of being *prepared* to perform it; for almost *all* these cases requiring it are cases of *emergency*, life being in jeapordy. All that is really required is a pair of pointed scissors and a teaspoon! The former may keep the orifice patent horizontally, the latter vertically, until better instruments are procured—and life is spared: indeed, the very issues of life are in some instances fearfully held, as it were, in our fingers!

Here the lecturer paused, but shortly added,—Gentlemen, I thank your kind invitation to give these lectures, and for your kind attention to them. I trust the three hours have not been spent in vain, and especially that the younger part of my audience will long remember with advantage the principles of medical doctrine which I have inculcated.

The lecturer having been invited to take the chair, Mr. Wilson rose and said that he should propose a vote of thanks to Dr. Marshall Hall for the kindness and courtesy he had shown in coming amongst them to communicate information, illustrated by experiment, concerning the physiology and pathology of the nervous system, which it had been the great pursuit of his life to investigate.

The students of the Chatham-street School of Medicine should, indeed, regard the present occasion as *red-letter days.* As for himself, and the rest of his professional brethren who had attended this course of lectures, he could say with confidence that they deeply appreciated the philosophic views of Dr. Marshall Hall; and when they contemplated the state of nervous physiology as it was in their own early day, and looked at it now, they must be greatly impressed with the debt of gratitude due to those eminent men who had so perfected this branch of science; foremost amongst whom he had no hesitation in placing their distinguished visitor. He concluded by moving the cordial thanks of the assemblage to Dr. Marshall Hall.

Dr. Noble had great pleasure in seconding the motion so justly and so appropriately submitted by Mr. Wilson. Thanks, certainly, were eminently due to their distinguished visitor for his kindness in coming amongst them, and in thereby giving to the gentlemen present an important advantage. They had not only had the gratification of meeting the propounder and discoverer of great physiological truths, but that, also, of listening to his own exposition of them, and of witnessing some of the experiments and demonstrations by which they are substantiated. And here he would observe that, however accurately such doctrines might be learnt from books, by the aid of diagrams, and by repeating the experiments, there was always an especial benefit in drinking in knowledge and valuable precepts at their spring. Look at certain analogies in literary experience. How clear and effective was the appreciation of history by him who had gone for his knowledge to the sources,—to the old quartos and the big folios, instead of to modern duodecimos! He could speak with gratitude of his own experience. He supposed it was some twenty years since that he had first applied himself to the physiological discoveries and practical teachings of Dr. Marshall Hall; probably he soon acquired a fair appreciation of their nature and value. Seven or eight years ago, however, he had had the privilege through Dr. Hall's kindness and courtesy, of witnessing at that gentleman's own house a long series of experiments made by him, and for several days of conversing with him upon all the allied topics; and from this experience he could tell how much more clear and decided was the apprehensions of facts and conclusions learnt in this way. The brief course of lectures now terminated had, in some measure, furnished the students, and the numerous practitioners who had attended the course, with a similar advantage. He was sure that they would feel as he had felt, in having been so privileged, delighted to have been taught the physiology, and much of the pathology, of *the Spinal System* by the eminent mind that conceived the same; and to have had demonstrations presented to them by the hand that first brought them out. For all these reasons, it was with pleasure, sincerity and pride, that he seconded Mr. Wilson's motion.

Dr. Marshall Hall then rose and thanked the mover and seconder of this vote of thanks; and, after briefly observing that nearly a quarter of a century had elapsed since he first began the studies which led to the detection of *the Spinal System* urged the students present to pursue their profession with enthusiasm, and early to select some special subject for study and investigation. Such a proceeding was sure, in due time, to bring its reward in reputation and in practice.—*London Lancet.*

ART. IV.—*Poole's Case.* By DR. CARNACHAN.

On the 27th of February, 1855, I was called in consultation to see William Poole, a young man aged 33 years, of unusually athletic form and muscular development, who had been wounded two days previously in an affray with fire-arms. He had received a bullet wound in the outer aspect of the right thigh, two inches above the upper border of the patella. The wound, however, which created alarm among his friends, was situated upon the anterior wall of the thorax, about three-quarters of an inch to the left of the mesial line, and about half an inch below a line drawn across the chest, from one nipple to the other. A bullet probe could be passed slantingly from right to left, along the track of the wound, for about an inch. At this depth, the probe was arrested, and it was not thought expedient to use force in making further exploration. Poole received his wounds during a deliberate onslaught made on him by some five or six persons, armed with Colt's revolvers. The first ball took effect on the right thigh, and brought him to the ground. While thus prostrate, another assailant placed the muzzle of a pistol close to his chest, and discharged its contents. He immediately jumped up, and reeling towards a door, rested, as if stunned, against it for support, during some minutes. He then fell, exclaiming that he was dying, and remained senseless, cold, almost pulseless, and apparently moribund, for about four hours. From this condition he rallied, and became so free from the usual symptoms of severe injury, that his medical adviser, Dr. Putnam, considered that the ball had not really penetrated into the thoracic cavity, and my opinion was sought to corroborate or dispel this favorable view of the case.

I found him sitting up in bed, his back resting on pillows for support, apparently at ease, and conversing with numerous acquaintances who had come to visit him. His countenance exhibited no expression of anxiety, and he answered placidly and without effort the questions I put to him. His pulse was 80 in the minute, the respiration easy, the surface of the body normal in temperature and moist. The stethoscope revealed the existence of no difficulty in the respiratory passages, and the normal *Tick Tac* of the heart beat with healthy precision. There were no signs of inflammation or of effusion into the pericardium.

With such freedom from morbid symptoms, I was disposed to concur with his medical adviser in auguring favorably of the case; for although it might be inferred from the general character of the wound, that the ball had passed somewhere into the cavity of the chest, it was not impossible that it had become lodged in some position, where it remained innocuous.

The previous treatment had been gently antiphlogistic; mild aperients, diaphoretics, acidulated drinks and low diet. The consultation resulted in a continuation of a similar mode of treatment, with an injunction that he should be kept in a state of absolute bodily rest, and free from every cause of mental excitement, as I felt far from certain that he had not sustained mortal injury.

The symptoms in Poole's case illustrate in a remarkable degree some of the peculiarities of wounds in the heart, and also the assertion made by Hervey, that the heart is not very sensible. I am informed by Dr. Putnam, who saw him at one o'clock on the morning of the 25th, about fifteen minutes after the wound was received, that the patient was at first nearly pulseless, was insensible, and that respiration was performed with great difficulty. In this condition, laboring also under the ordinary signs of shock to the system from a gun-shot wound, he continued for about four hours, before any signs of reaction were manifested. Vomiting now occurred; this was followed by increased action of the heart, and sensibility gradually returned.

During the same day (25th) he continued improving, and on the evening visit, the pulse beat 84. The skin was moist and natural, tongue healthy, with no unfavorable symptoms otherwise. No external hæmorrhage had occurred from the wound, nor had any evidences of internal hæmorrhage been evinced by vomiting or expectoration.

Monday, 26th. The wound was examined more particularly, and no traces of the bullet could be found, or any special indications manifested of its presence in the cavity of the thorax. Symptoms about the same.

Tuesday, 27th. I saw the patient for the first time, and found him in the favorable condition already stated.

Wednesday, 28th. Complained of slight headache; pulse 86; bowels not having been moved, a gentle aperient was ordered, by which the pain in the head was relieved. At times the patient had complained of transient and slight pain about the region of the heart.

Thursday, March 1st. Was called in to see patient a second time. Had slept well; pulse 80; respiration natural; appetite good; skin moist; action of the heart natural. He stated that he felt no pain or unpleasant symptom except weakness, remarking, however, that he felt well enough to go out.

Friday, March 2nd. The patient perfectly comfortable; pulse 82.

Saturday, 3rd. Patient so well that, upon visiting him, for the third time, by request, he was found receiving his friends, and, contrary to previous injunctions, conversing freely with them. Enjoined repose.

Sunday, 4th. No untoward sign connected with either the functions of circulation or respiration. During the day, he received, against positive orders, the visits of more than a hundred people, with whom he conversed. His own statement was that he felt quite well.

Monday, 5th. Dr. Putnam was sent for early in the morning. At eight o'clock, A. M., the patient was found in a high state of irritability; pulse 120; skin hot and dry, and complains of pain generally; respiration troubled, and more frequent. An aperient was ordered, by which the symptoms were much alleviated.

Tuesday, 6th. Was again requested to see patient. Pulse 100; countenance anxious; the adnata tinged yellow; complained of debility, but said he had no pains about the heart; signs of effusion.

Wednesday, 7th. Passed a restless night, notwithstanding the administration of an anodyne: pulse 120; countenance more anxious; respiration much troubled; inability to remain in a recumbent posture; symptoms gradually becoming more grave.

At two o'clock, A. M., Thursday morning, his attending physician was sent for. The patient was now rapidly sinking; pulse almost imperceptible, and with difficulty counted; respiration short, frequent, and difficult; extremities cold; countenance pallid and hippocratic. From this time he continued to sink, and expired without a struggle, at five o'clock.

Autopsy seven hours after death.—The body was in a state of perfect preservation, and showed a powerful and well-developed organization.

The surface of the body presented three orifices of gun-shot wounds; two on the external side of the right thigh, a short distance above the patella, by which, apparently, a ball had made its entrance and exit, respectively; and one on the anterior aspect of the chest, three-quarters of an inch to the left of the median line, and about half an inch below a line drawn across the chest, from one nipple to the other. The examination revealed that all the organs of the body were in a healthy condition.

The sternum and cartilages of the ribs having been partially elevated, a bullet probe could be passed without difficulty, slanting from right to left, through the wall of the thorax, at the place of junction of the cartilages of the fifth and sixth ribs with the margin of the sternum.

The sternum being completely elevated, the pericardium was seen to be much distended, and on its surface, in continuation with the external wound, was observed a rough spot, which proved to be an opening into the cavity of the pericardium, thinly closed by the exudation of plastic material.

The right and left cavities of the pleura were free from effusion, and the lung on each side was in a sound condition. The pericardium was found filled with serous fluid, tinged with blood, and was so distended that it encroached very much upon the lungs on both sidess. Upon opening the sac of the pericardium, and removing the large quantity of serous fluid, the external surface of the heart and serous lining of the pericardium were both found to be entirely covered with plastic exudation. A cursory examination of the heart in position did not disclose the presence of any foreign body. It was afterwards taken out, and upon a careful examination, a bullet one inch in circumference was found enveloped in a delicate cyst, and imbedded, to the depth of a quarter of an inch, in the muscular tissue of the septum, between the right and left ventricles. Its locality was only indicated by the sense of touch, for as the wound had entirely cicatrized, there was no outward visible sign of its presence. Obviously, the cause of death was inflammation of the pericardium and heart and its results.

This case is one to be added to the few already on authentic record showing that penetrating wounds of the heart are not always immediately mortal.

It has, moreover, peculiar features which will render it remarkable in the annals of surgical pathology.

Several cases are mentioned, in which patients have survived one or more days the effects of penetrating and non-penetrating wounds of the heart, inflicted by cutting instruments, and also of non-penetrating wounds inflicted by *gun-shot.*

But the peculiarity of this case is, that although the wound was a penetrating gun-shot wound, leaving the ball deeply buried in the tissue of the heart, but rested on its surface, partially encroaching upon the muscular wall of the heart, and enfolded partly by the pericardium.

The autopsy of this case also revealed, that the wound was not only closed and cicatrized, but that a cyst was in process of formation around the ball.

By this case, also, it is established, that hæmorrhage is not necessarily a consequence of a gun-shot wound of the heart; for the serum found in the pericardium was merely tinged with blood, and there was no coagulum. The absence of hæmorrhage may be accounted for by the conical shape of the ball, and by its direction, two circumstances which favored its passage between the muscular fibres of the superficial layer of the heart, without severing them, and caused it to rest slantingly behind the anterior coronary artery, without wounding it.—*New York Med. Monthly.*

No. 2, *Waverly Place,* 20th March.

ART. V.—*Death from old age, or Natural Death.*

The following account of death from old age, by the distinguished divine, Dr. A. L. P. Green, of Nashville, will be read with great interest by every student of nature. The death of Aunt Phillis, as the Doctor expressed it, was indeed a "natural death," for death from disease is not according to nature, but might truly be classed under the head of "accidents," or "casualties."—*Ed. Nashville Medical Journal.*

DR. EVE — Dear Sir: I promised you that I would furnish you with some of the facts connected with the last days of Aunt Phillis, an old negro woman of mine who died last fall. Aunt Phillis was at the time of her death, at the lowest estimate, 111 years old and the probability is that she was several years older. For fifty years she has enjoyed uninterrupted health, and as far as I have been able to learn, she was never sick in her life except at the birth of her children. For thirty years of her life, and down to within three years of her death, she did not seem to undergo the slightest change in her appearance, time exercising little power over her. The first sign of decay was that of sight, which took place about three years before her death; up to that time she was in the full enjoyment of all her senses, and at 104 years would have married an old negro man of 75 if I had not objected. Her sight failed not in the usual way, but she became near-sighted, not being able to see objects at a distance. Soon after this, her hearing declined, but up to the time of her death she could still hear better than old persons generally do. The first indication of mental failure was that of locality, she not being able to find her way to a neighbor's house, yet her memory seemed perfect in all other respects. She recollected her friends and old acquaintances, but could not find her way to their houses. I at first supposed that this was owing to defective sight, but on examination found it was in the mind. Still her locomotion was good—she had the full use of herself, and could walk strong and quick like a young person, and held herself up so straight that when walking from me I often took her for some of the younger servants about the premises. The next, and to me the most singular sign of decline, was that she lost the art of walking—not that she had not strength to walk, but forgot how to walk. The children would lead her forth and interest her for a while, and she would get the idea which seemed to delight her very much, and she would walk about the yard and porches until some person would tell her she had walked enough—but she would no sooner take her seat and sit for a few moments, before all idea of walking would be gone; and she would have to be taught over again. At length she became unwilling to try to walk unless she had hold on something; take her by the arm and she would walk, and walk well, but just as soon as you would let her go she would stop, and if no further aid was afforded her she would get down and crawl like a child; and at length became so fearful that she refused to walk altogether, and continued to sit up during the day, but had to be put to bed and taken up like a child. After a while she became unwilling to try to get up altogether, and continued to lie until she died. All this time she seemed to be in good health, took regular meals, and her stomach and bowels were uniformly in good condition. I often examined her the best I could, and she had no pains, no sickness, no aches of any kind, and from her own account, and from all that I was able to learn, she was in good health and all the while in fine spirits. The intellect and the mind seemed to be perfectly good, only that she did not seem to know where she was all the time. At length one of the children said to me that Aunt Phillis was getting cold, and on examining her I found it even so; the extremeties were cold; still she took her regular meals, and did not complain of anything, and the only change that I recollect of, was that she slept a little more than usual. The coldness increased for two days, when she became as cold as a dead person. Her breathing began at length to shorten, and grew shorter and shorter till she ceased to breathe. Death closed in upon her like going into a soft, sweet sleep, and for two minutes it was difficult to tell whether she was breathing or not. There was no contortion, no struggle, no twisting of the muscles, but after death she might have still been taken, on slight examination, to have been in a deep sleep. So passed away Phillis — the only natural death I ever witnessed.—*Nashville (Tenn.) Med. Jour.*

Art. VI.—*Statistical Monthly Report of the Principal Operations performed in the London Hospitals.*

Lithotomy.—The case (*Case* 5) left under treatment last month has recovered. Number of cases, 4; recovered, 3; under treatment, 1.

Case 1. A boy, in good health, aged 12, under the care of Mr. Cutler, in St. George's Hospital. Two stones were removed, each of considerable size, and consisting of phosphate of lime, with lithic acid nucleus. Recovered. *Case* 2. A boy, aged 8, in moderate health, who had suffered extremely from the irritation caused by the stone, and whose urine was habitually alkaline. The usual operation was performed by Mr. Hawkins, in St George's Hospital, and a stone of moderate size removed. The nucleus consisted of lithic acid, and was surrounded by concentric rings of lithic acid, and lithate of ammonia the outer coating being of triple phosphate. The patient is doing well. *Case* 3. A man, aged 67, a farm laborer, stout, florid, and in good health, under the care of Mr. Cock, in Guy's Hospital. The usual operation was performed, and a large stone removed. Recovered. *Case* 4. A boy, aged 7, in good health, but who had suffered extremely from the stone, under the care of Mr. Cock, in Guy's Hospital. Recovered.

Lithotrity.—A man, aged about 54, is in the London Hospital, under Mr. Curling's care, on account of calculus in the bladder, on whom two lithotrity operations have been performed during the last month. Three years ago, Mr. Curling adopted the same measures, and succeeded in relieving him of all symptoms of stone, numerous fragments having been passed. He is the subject of a very much enlarged prostate, and habitually requires the use of a catheter.

Lithectasy (in the female).—Two cases have occurred, during the month, of operations for the removal of calculi from the female bladder. *Case* 1. A woman, aged 21, under the care of Mr. Fergusson, in King's College Hospital, admitted on account of symptoms of urinary iritation. It was found, on examination, that she had stone in the bladder, and that there was also a portion of iron-wire, on which probably the incrustation had formed, and one end of which projected into the vagina. Mr. Fergusson's operation consisted in incising the left side of the urethra to a sufficient extent to allow of the removal of the stone (previously crushed), and of the wire. The latter proved to be a common hair-pin and had doubtless been introduced by the patient herself. The case remains under care.

Case 2. A child, aged 3, under the care of Mr. Hilton, in Guy's Hospital. She had suffered so extremely from the iritation, that it was at first feared she would not bear any operation. After a few week's preparatory treatment, the chief measure in which consisted of opiate enemata, her health was thought sufficiently restored, and Mr. Hilton removed successfully a large calculus. It was necessary to incise both sides of the urethra, but the wounds healed kindly, and the child left the Hospital well, and with perfect control over the bladder.

Herniotomy.—The case (No. 11) left under treatment by last month's report, has recovered.

Number of cases, 10; recovered, 5; under treatment, 3; died, 2.

Case 1. A woman, aged 47, under the care of Mr. Curling, in the London Hospital; hernia femoral; strangulation three days, sac opened. About a week after the operation, feces began to escape by the wound, and have since continued to do so. The patient is doing fairly, but yet under treatment. *Case* 2. An infant, aged 1 year, under the care of Mr. Adams, in the London Hospital. The hernia was of the inguinal form, but did not extent into the scrotum; strangulation had existed for about twenty-four hours. The incision through the skin having been made, and the upper margin of the external ring divided, the intestine slipped back spontaneously. The child recovered well. *Case* 3. A woman, aged 60, under the care of Mr. Erichsen, in University College Hospital. The hernia was femoral, and had been five days strangulated. The sac having been opened, it was found to contain some fetid pus, and a knuckle of intestine, in a gray and grangrenous condition; the stricture was accordingly freely divided, and the bowel left *in situ.* The after-treatment consisted in the application of poultices to the part, and the internal exhibition of opium. Shreds of slough soon after began to separate, and, on the fourth day, the bowel gave way, and feces began to escape in the wound. On the seventh day, motions began to pass by the anus, after which, the discharge by the wound gradually diminished. The healing process was complete on the twenty-fifth day, the recovery being perfect. *Case* 4. A woman, aged 65, hernia femoral; strangulation nearly three days; sac opened. Profuse suppuration from the sac followed, attended by symptoms of acute peritonitis, from which the patient died on the fifth day. No autopsy. *Case* 5. A woman, aged 48, under the care of Mr. Hancock, in Charing-Cross Hospital, hernia femoral; strangulation 12 hours; sac opened; recovered. *Case* 6. A woman, aged 52, under the care of Mr. Callaway, in Guy's Hospital; hernia inguinal, and of small size; strangulation about 52 hours; sac not opened; recovered. In this case the whole tumour slipped up spontaneously as soon the margin of the external ring was cut. *Case* 7. A woman, aged 73, in Guy's Hospital, under the care of Mr. Birkett. She had, for many years, been the subject of an irreducible femoral hernia on the left side; the tumour had become larger, and there had been well-marked symptoms of strangulated bowel for about 16 hours previous to the operation. The stricture having been divided, external both to sac and to fascia propria, the bowel was easily reduced. More hemorrhage than usual followed the incision of the ring, but it was arrested by pressure. All symptoms of strangulated intestine ceased after the operation. The woman lived rather more than three days, and died apparently of bronchitis, to which she had long been subject. At the autopsy, no decided evidences of peritonitis could be found; in the left iliac region lay a portion of ileum about three inches long, which, from its appearing more congested than the rest, was judged to have been the strangulated part; its tissues were quite healthy. In the wound made by the operation was a clot of blood, which had probably proceeded from a vein, as no wounded artery could be discovered. The stricture had been divided external to the fascia propria, and the latter membrane was much thickened, and closely adherent to the peritoneal sac. The sac, the size of a small egg, contained a piece of omentum, which adhered to its neck, and a small quantity of dark-coloured fluid. Most of the organs in the body were in a state of fatty degeneration. The bronchial tubes contained much mucus. *Case* 8. A woman, aged 48, under the care of Mr. Stanly, in St. Bartholomew's Hospital; hernia femoral; strangulation four days; sac not opened; recovered. Mr. Stanly operated by means of a small incision, not more than three-quarters of an inch long. *Case* 9. A man, aged 79, under the care of Mr. Lawrence, in St. Bartholomew's Hospital; hernia scrotal, the size of two fists; strangulation thirty hours; sac opened; doing well. Eighteen inches of small intestine were exposed in a much discoloured state, but apparently sound; a mass of omentum weighing seven ounces was cut away. Some suppuration of the sac and phelgmonous inflammation about the wound followed, but are now subsided. *Case* 18. A man of middle age, in the London Hospital: hernia scrotal; very large; of seven years' standing, but strangulated only half an hour; sac not opened; doing well.

Ligature of Arteries.—Case 1. A man aged 49, under the care of Mr. Curling, in the London Hospital, on account of a severe concussion, had a pulsating swelling form in the right orbit. The eye became pushed forwards, and vision much disturbed. There were all the signs of aneurism, and the conclusion arrived at was, that in the accident some injury had been inflicted on the trunk of the opthalmic artery, which had led to its ultimately giving way. The tumor rapidly enlarging, Mr. Curling decided to place a ligature on the common carotid artery. The operation was successfully performed. Immediately afterwards the man lost all sight in the eye, but within a few days afterward the faculty gradually returned. The recovery was perfect, all signs of tumor disappearing, and the eye having sunk back into its proper site, and regained its function completely. Case 2. A woman aged 30, admitted under the care of Mr. Hancock, into the Charing-cross Hospital, on account of an injury over the wrist. To arrest the bleeding, pressure was used, but repeated attacks having made it evident that the ulnar artery was wounded. Mr. Hancock cut down upon that vessel, and tied both ends at the seat of injury. The operation was done a week after the accident, and the patient recovered well.

Trephining of the Skull.—The following case occurred in Guy's Hospital, under the care of Mr. Birkett. A boy aged 7, was admitted with the account that a carriage-wheel had passed over his head; but his scalp was not cut anywhere. Soon after admission, the symptoms of compression became so urgent that Mr. Birkett was induced to divide the scalp over some extravasated blood in order to examine the bone beneath. A fracture of the squamous portion of the right temporal bone, running into the parietal, having been discovered, the trephine was applied on its edge. No blood was, however, found between the dura mater and the bone. Death took place within a few hours of the accident. The *post mortem* showed extensive laceration and contusion of both cerebral hemispheres, and besides the fracture just mentioned, one extending into the petrous portion of the right temporal bone. There was no blood external to the dura-mater on either side.

Compression Treatment of Aneurism.—Mr. De Morgan's case, in the Middlesex Hospital, continues under care. Not much effect has as yet been produced upon the tumor. It is situated just above the popliteal space, between the hamstring tendons, and is about the size of an orange. The patient is a healthy, florid man, aged 60; he bears the treatment very well, and can now sleep with the compressor so tight as to quite arrest pulsation. Mr. De Morgan is applying light pressure over the sac itself. A man of middle age is under Mr. Cock's care in Guy's Hospital, for popliteal aneurism, on whom the compression plan is being tried. The aneurism was at first the size of a large egg, and now, after about a month's treatment, it has been reduced to that of a pigeon's egg, and has become more solid. It still, however, pulsates. The man is not able to bear quite continuously such an amount of pressure as arrests the pulsation entirely.

Amputations.—Of the cases left under care the following have ended fatally: Case No. 7, of the Report of March—The man had been much reduced by secondary hemorrhage a week after the operation, and death, which occurred in the twelvth week, appeared to be induced by exhaustion. Bed sores had formed, and there had been profuse suppuration from them. Of last month's Report, Case 5. Death from pyæmia fourteen days after the operation. At the *post mortem* secondary deposits were found in the lungs and liver. Case 11. Death about one month after the operation, well-marked symptoms of pyæmia having been present. With these exceptions the cases are either recovered or doing well.

Number of cases, 14; recovered, 1; under treatment 12; died, 1.

Of the Thigh.—Case 1. A boy of strumous diathesis, aged 8, under the care of Mr. Erichsen, in University College Hospital. Amputation through the condyles of the femur was performed on account of disease of the tibia following an injury, and involving both the ankle and the knee-joints; under treatment, and doing well. Case 2. A man aged 29, under the care of Mr. Stanley, in St. Bartholomew's Hospital. An operation on account of ununited fracture of the femur had been performed three months ago (see *Medical Times and Gazette* for April 22, page 406,) and had failed, leaving the man much debilitated by long suppuration, and with the parts in the condition of a compound fracture. There appeared no chance of recovery with a useful limb, and Mr. Stanley determined accordingly to remove it. Amputation was performed not much below the great trochanter. No fewer than twenty-six arteries required ligature before the bleeding could be arrested, and, in spite of the care exercised in this respect, a slight attack of secondary hemorrhage occurred a few days afterward. The man has since done well, and may now be regarded as convalescent. Case 3. A boy aged 13, of strumous constitution, under the care of Mr. Stanley, in St. Bartholomew's Hospital, on account of necrosis of the lower part of the femur, involving the knee-joint. Amputation in the lower third of the thigh was performed, and the boy has recovered without a bad symptom. Case 4. A man, aged 40, in good health, under the care of Dr. Cutler, in St. George's Hospital, on account of chronic diseases of the knee-joint, which, although no abscesses had formed, prevented him from using the member. Doing well. Case 5. A boy, aged 14, under care of Mr. Cutler, in St. George's Hospital, on account of strumous disorganization of the knee. Doing well. Case 6. A man, aged 50, under the care of Mr. Paget, in St. Bartholomew's Hospital. Secondary amputation was performed two weeks after compound fracture of the tibia and fibula; under treatment.

Of the Leg.—Case 7, A woman aged 31, under the care of Mr· Paget, in Bartholomew's Hospital, on account of diseased ankle. A flap amputation in the lower third of the leg was performed, and her progress since has been good. Case 8. A man aged 23, under the care of Mr. Critchett, in the London Hospital; a strong and healthy laborer. Primary amputation after compound fracture. Under treatment.

Of the Foot.—Case 9. A girl, aged 16, in tolerable health, under the care of Mr. Cutler, in St. George's Hospital, on account of strumous disease of the metatarsus and part of the tarsus. Chopart's amputation was performed, and the stump promises to be a very good one. Case 10. A man of middle age, admitted under the care of Mr. Critchett, into the London Hospital, on account of severe compound fracture of the foot, in which the ankle-joint had been laid open, the femur on the same side being broken. With some difficulty the operator managed to obtain skin enough to allow of amputation at the ankle. The flaps afterwards sloughed away, leaving the bones exposed. The man, whose habits had been very intemperate, had, by the very free use of stimulants, been kept from passing into delirium, and his condition appeared promising, the stump being covered with healthy granulations. Nearly a month after the first operation, it was decided to remove the projecting ends of the tibia and fibula, and the patient's consent to this measure was accordingly asked. The thought of a second operation seemed to annoy him very much, and he refused to submit to it. On the same evening, violent delirium set in, and continued till death, which took place three days later. At the *post mortem* the internal viscera were not examined ; no phlebitis was discovered, but there was a collection of matter around the ends of the fractured femur.

Of the Upper Extremity.—Case 11. A man aged 25, under the care of Mr. Ward, in the London Hospital, on account of crushed hand. Primary amputation at the wrist-joint was performed. Doing well. Case 12. A man aged 31, under the care of Mr. Cutler, in St. George's Hospital, on account of contusion of the forearm. Gangrene resulted ten days after the accident, and amputation above the elbow became necessary. The patient remains under treatment. Examination of the arm showed the ulnar and radial arteries plugged with lymph. Case 13. A man of middle age, in the London Hospital ; primary amputation through the forearm, on account of crushed hand. Recovered. Case 14. By Mr. Quain, in University College Hospital ; amputation above the wrist, on account of an epithelial cancer on the hand. The patient, a woman aged 60, in good health, is going on favorably.

Excision of Bone and Joints.—The numerous cases of this class previously reported remain under treatment. During the month there have been performed the following : Case 1. Excision of the head of the femur, by Mr. Erichsen, in University College Hospital. The patient was a boy, aged 8, much emaciated, and in an advanced condition of hectic, from long-standing disease of the hip joint. The head and neck of the femur were found to be extensively diseased, and undergoing absorption ; the acetabulum was also involved, and required to be gouged out. The patient has done well since the operation. Case 2. By Mr. Fergusson, in King's College Hospital ; excision of the elbow-joint of a young man. The patient is under treatment. Case 3. By Mr. Paget, in St. Bartholomew's Hospital ; excision of the elbow joint of a woman, aged 18. The patient had long suffered extreme pain in the joint, which treatment failed to relieve ; the articulation was quite destroyed, and, among other measures, free incisions had previously been tried. After the excision of the diseased extremities of the bones, all pain ceased, and the case now promises a speedy cure. Mr. Paget did not make the ordinary H-shaped incision, but omitted the inner one of the longitudinal cuts, believing that he obtained quite sufficient room without it. Case 4. By Mr. M'Murdo, in St. Thomas's Hospital; excision of the left half of the lower jaw on account of malignant disease. The patient was a cachectic man, of very nervous temperament, aged 28. The tumor grew from within the bone, which it had expanded; it was rapidly increasing. Mr. Simon made an examination of its microscopic characters after the excision, and pronounced it an example of the fibro plastic or myeloid tumor. The operation was attended by very little loss of blood. The patient did well for the first ten days, when he was attacked by erysipelas, under which he gradually sank, and death took place on the fourteenth day. No *post mortem* examination of the viscera was permitted. Case 5. Under the care of Mr. Birkett, in Guy's Hospital; excision of the astragalus. The patient, a boy aged 8, had sprained his foot some months previously, and, in spite of treatment, the disease had advanced till an operation became unavoidable. Under the influence of chloroform, Mr. Birkett examined the part and cut down upon and removed as much as practicable of the affected bone. Since the operation, the boy's health has improved, and there seems some chance of saving the foot.

Excision of Malignant Growths.—Most of the cases mentioned last month yet remain under treatment; none have ended fatally. During the month there have been performed—Case 1. In the London Hospital, by Mr. Adams; excision of the upper part of the ear of a man, aged 66, on account of epithelial cancer. Case 2. In St. George's Hospital, by Mr. Tatum; removal of large epithelial cancer from the lower lip of an elderly man. Case 3. By Mr. Quain, in University College Hospital; on account of epithelial cancer on the hand; amputation above the wrist. (See *Amputations.*) Case 4. By Mr. Lawrence, in St. Bartholomew's Hospital; excision of a mass of epithelial cancer, the size of a walnut, from the prepuce and side of glans penis of a middle-aged man; the disease was of eight week's duration; recovered. Case 5. By Mr. Lawrence, in St. Bartholomew's Hospital; removal of two-thirds of the scrotum of a chimney-sweep, aged 33, on account of epithelial cancer. One of the testicles was so involved that it was found necessary to remove it. The patient is doing well. Case 6. By Mr. Paget, in St. Bartholomew's Hospital; amputation of the entire penis of a man aged 39. The disease was of three years' duration, and had formed in the cicatrix of an injury received in boyhood; recovered. Case 7. By Mr. Paget in St. Bartholomew's Hospital; excision of a scirrhous breast from a woman aged 46; recovered. Case 8. By Mr. Poland, in Guy's Hospital; excision of a scirrhous breast from a woman aged 35. Doing well. Case 9. By Mr. Cock, in Guy's Hospital, excision of a tumor of doubtful nature from the scalp of a boy, aged 14. The growth had rapidly reproduced itself after a former excision. (See Case 3, of last month's report.) In the last operation, Mr. Cock removed the pericranium, and a thin shell of bone has since exfoliated. It is hoped, therefore, that the whole has now been extirpated. The lad is nearly recovered, and appears in good health. Case 10. By Mr. Avery, in the Charing-cross Hospital, excision of a scirrhous breast from a middle-aged woman; recovered. Case 11. By Mr. Birkett, in Guy's Hospital; excision of the right half of the lower lip, on account of epithelial cancer. The patient, a man aged 62, had suffered from the disease for two years, and one of the submental lymphatics had become enlarged. Phlegmonous erysipelas of the pharynx occurred on the third, and caused death on the ninth day after the operation. At the autopsy, pus was found infiltrated in all the tissues of the pharynx; the enlarged gland had softened in the center. None of the internal viscera were affected with cancer. Case 12. By Mr. Birkett, in Guy's Hospital; amputation of the penis immediately behind the glans, on account of epithelial cancer. The patient was a man aged 67, *not* the subject of congenital phymosis. The disease had begun on the lining of the prepuce, which latter it had perforated, and then formed a sprouting wart-like growth on the outer side. The surface of the glans was only superficially involved. Recovered.

Removal of Non-malignant Growths.—Nearly all the cases mentioned in the last report have recovered. In Mr. Birkett's case of epulis, a second operation has been performed for the removal of a small portion which had probably escaped on the first occasion.

During the month, there have been performed Case 1, by Mr. Birkett, in Guy's Hospital, removal of a testis under the following circumstances: A man, aged, 33, had, for three months before admission, noticed his right testicle larger than the other. Subsequently fluid effused, and he had been twice tapped for hydrocele. When he applied to Mr. Birkett, there were evidences of the presence of fluid, and a trocar then introduced drew off about a half an ounce of serum. Hoping that the disease might prove hæmatocele, the operator laid open the cavity of the tunica vaginalis. This was done by a free incision, and the testis exposed. The tunica vaginalis was seen to be entire, and expanded over a large growth within it. An incision having been made into it, a fleshy mass was exposed and immediate extirpation of the whole gland was accordingly performed. The disease proved, on further examination, to be a fibrocystic tumor, about the size of an egg, surrounded by a firm fibrous cyst, and inclosed the expanded gland structure of the testis. The cord was quite healthy, and the testis, excepting from its expansion by the growth within it, did not appear diseased. Mr. Birkett made his incision in the integument more posteriorily than is usually done, in order to allow of the more easy escape of the purulent discharge. The healing process was completed without drawback. Case 2. By Mr. Stretton (house-surgeon,) in St. Bartholomew's Hospital; excision of a small, painful, subcutaneous tubercle. In microscopic character the tumor appeared to be simply cartilaginous. The patient was a woman aged 42. Recovered. Case 3. In St Bartholomew's Hospital, by Mr. Lawrence; removal of an exostosis about the size of an egg from the inner side of the femur at the beginning of its lower third. The patient was a young woman, and had known of its existence for three years. Recovered. Case 4. By Mr. Birkett in Guy's Hospital; removal of a growth of doubtful nature from the right mammary gland of a single woman, aged 37. It had been known to exist for six months, and, in June, 1851, Mr. Birkett had excised a similar one from the same part. Both the tumors were circumscribed and moderately firm. In neither were the elementary structures of their arrangement similar to those of any form of cancer. Besides the above, fatty tumors in two cases, and encysted in four, have been successfully operated on.

Tracheotomy.—In a case of croup, in a child aged 10, by the Physician's Assistant, in University College Hospital. The operation was performed on the second day of the disease, and afforded relief; but the child ultimately died of pneumonia, with extension of croupal inflammation down the trachea.

Art. VII.—*Food and Digestion.*

Grunewald and Schroeder made their observations on a peasant woman affected with fistula of the stomach. The woman was otherwise healthy, thirty-five years of age, weighed 53 kilogrammes, and was, at the time of observation, nursing a child; the fistula existed for two or three years, and was caused probably by a perforating ulcer of the stomach. The *quantity* of gastric juice, after abstraction of the saliva (65 grammes per hour) was computed at 584 grammes (= 10 oz. nearly) for every hour, or 14,016 kilogrammes (= 34¾ imperial pints nearly) for the day, which is about the fourth part of the weight of the whole body, a proportion much larger than that given by Bidder and Schmidt (6·4 kilogrammes for an individual weighing 64 kilogrammes;) 1 kilogramme of weight of a man would secrete, according to this calculation, 264 grammes (=8½ ounces nearly) of gastric juice in twenty-four hours. The smallest proportion was obtained in the morning (state of fasting,) being, however, even then not less than between 40 and 400 grammes per hour. The fluid collected at this time was, in general thin, serous, colorless, and clear; at other periods it was more viscid, containing sometimes bile, without any accompanying signs of functional derangement; not rarely scarcina was detected in it by aid of the microscope. As regards the *chemical constitution*, according to the examination performed by C. Schmidt, the fluid obtained at an early hour of the morning (state of fasting) was either neutral or slightly alkaline; after the ingestion of food it was always acid. *Hydrochloric acid* was not found in any of the analyses of the various portions of the gastric juice secreted at different times of the day, but *butyric* acid and the presence of *lactic* acid became highly probable.

The organic substances consisted of coagulable albuminous substance (pepsin,) sugar, butyric acid, uncoagulable proteinaceous substances, and lactic acid. The organic acids are not considered as originally present in the secretion of the stomach, but as products from the ingested aliments; they are changeable in quantity according to the quality of food. The hydrochloric acid, on the contrary, was considered as an essential component, although it is not exhibited by the analysis, probably on account of its being so easily bound by the alkalies of the saliva. In an analysis performed at a period, the results of which are communicated in the appendix, Schmidt actually found free hydrochloric acid, but only in the proportion of 0.2 in 1000 parts—a proportion ten times smaller than in the dog. Concerning the question whether the gastric juice prevents the saliva from transforming starch into sugar (as asserted by Bidder and Schmidt) the authors found that the action of saliva is not annihilated; they confirm, however, the observaiton of Bidder and Schmidt, that no sugar is detected in the stomach of the dog even after the ingestion of boiled starch.

The digestion of *proteinaceous food* was examined by introducing weighed pieces of coagulated albumen, meat, etc., in thin linen bags through the fistula into the stomach, and observing both the loss of substance within a certain space of time, and the changes in the microscopic structure of elements. Thus it was found that, for proteinaceous substances, the dissolving power of the gastric juice of man is far inferior to that of the dog; their solution is completed in the stomach of the dog within two to four hours, in that of man it requires nineteen to twenty hours. Raw meat is better digested by the stomach of man than boiled meat, and veal better than beef.

Concerning the *microscopic alterations*, they found after one hour and a half the primitive fasciculi easily separable from each other, without change in themselves, the sarcolemma destroyed; after two hours and three quarters, the primitime fasciculi commenced to exhibit transverse fissures; after three hours, only transversely striated lamellæ were visible; after three hours and a half, besides the quadratic lamellæ, many primitive fasciculi, fissured in longitudinal and transverse direction, frequently dentated at the extremities; after three hours and three quarters, the primitive fasciculi twice or three times divided in the longitudinal direction; after four hours and a half, scarcely any solid remains left in the stomach, except some few primitive fasciculi much fissured in the longitudinal and transverse direction, still however, exhibiting the transverse striæ. After three and a half to four hours, the stomach is, in general, empty; the protenaceous substances become, therefore, subject to the influence of the entire secretion, etc. As regards the digestion of *fat*, the membrane of the cells was dissolved in the stomach; but the fat itself did not undergo any alteration. *Milk*, after three quarters of an hour, formed a thick coagulum, enclosing a large quantity of milk globules and free fat; after two and a half hours, the casein was seen partly as amorphous substance, partly in transparent, membrane like pieces, with some unchanged milk globuli; after three hours and three quarters, scarcely any remains were left in the stomach.

These alterations, which required in the stomach of this woman three hours and three quarters to four hours and `a half, were completed in that of a dog within two hours.

Finally, the authors allude to the great importance of the secretion of the gastric juice for the intermediate circulation of fluids and the intermediate change of matter, the principal object of which is to economise in the animal household, by prolonging the series of changes to which animal matter is submitted within the organism, and thus to render it for a longer time efficient in the discharge of vital processes. We find ourselves more compelled to adopt this view, as the quantity of the secretion amounted in this instance to one-fourth of the weight of the whole body.

Kroeger gives in his dissertation the results of some experiments performed with Prof. Bidder. Through a fistula in the pancreatic duct they collected the pancreatic juice during certain spaces of time, at various periods of the day, and under various influences. Concerning the quantitative relations, 1 killogramme of dog secretes, on the average, within twenty-four hours, about 893 grammes of pancreatic juice. According to this calculation, an adult man (weighing 64 kilogrammes) would secrete in twenty-four hours, 5·715 kilogrammes, i. e., nearly the eleventh part of the weight of the whole body. The ingestion of food exercises great influence over the secretion, the latter becoming much increased in quantity almost immediately after meals, reaching its maximum within about half to three-quarters of an hour after the meal, when it is about six or ten times larger than it had been just before the ingestion of food. Water has not the same effect: on the contrary, when taken simultaneously with solid food, it prevents the latter from causing so evident an increase. The concentration of the pancreatic juice appears frequently diminished in the same measure as the quantity is increased, but this phenomenon is not a consistent one; and, at all events, the absolute quantity of solid substances is greater after meals than before.

Concerning the physiological action of the juice, its power of transforming starch into sugar is not doubted. According to the author's experiments, 1 gramme of the fresh juice transforms within half an hour, under the influence of a temperature of thirty-five degrees. C. 4.672 grammes of dry starch into sugar; as 1 gramme of fresh juice cantains 0.014 grammes of pancreatic ferment, one gramme of this ferment would transform 333.7 grammes of dry starch. If we assume, with Frerichs, that an adult man requires daily about 400 grammes (=15 ounces nearly) of starch to compensate the daily loss of carbon, the quantity of pancreatic juice necessary for the transformation of this starch into sugar would be less than 105 grammes, while the quantity actually secreted amounts to more than 5000 grammes. Kroeger is therefore of the same opinion with Bidder and Schmidt, viz: that the pancreatic juice cannot have as its *principal* function the transformation of starch into sugar. As one of the functions, he considers the promotion of the constant interchange of fluids within the body, in the same manner as Bidder and Schmidt have made it so probable concerning the salavia, and with Grunewald and Scroeder concerning the gastric juice. It further appears to him that an intimate connexion exists between the secretion of the stomach and that of the pancreas, namely: that the hydrochloric acid secreted by the former is, after having performed its part, neutralized by the soda of the latter, thus again forming the chloride of sodium previously disunited by the process of secretion. In favor of this theory, Koeger observes that the hydrochloric acid secreted by 1 kilogramme of dog through the gastric juice in twenty-four hours, amounts to 0.305 grammes, while that of soda contained in the pancreatic juice of twenty-four hours, is calculated at 0.237 grammes, i. e., very nearly the equivalent (0.259) corresponding to 0.305 grammes of hydrochloric acid.—*British and For. Med. Chir. Review, Jan.,* 1855.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

Autobiography of Charles Caldwell, M. D., with a preface, notes, and appendix. By HARRIET W. WARNER. Philadelphia: Lippencott, Grambo & Co. 1 vol. octavo pp. 454.

This book, although written several years since, has, under the superintendence of HARRIET W. WARNER, just made its appearance. In style it differs in no respect from that which characterises the many essays, monographs, etc., that the author has written. Force, perspicuity, and often elegance were his, to an extent that gave him a place among the leading writers of his age.

The *matter* of which the volume is composed, is in the main interesting. The author lived for half a century in the midst of all the efforts that have been made in our country to build up the medical profession. He knew also the "actors," most of whom he has attempted to portray, morally and intellectually; and he also details with some care the part he himself took in what was going on.

With reference to the manner in which the author has performed his task, there is quite a diversity of opinion already expressed by Reviewers. Some speak of the work as creditable in most respects, others as not calculated to benefit the the profession, or give its author character with posterity.

The simple circumstance of being a biographer excites some prejudice against an individual. Most men are willing that posterity shall weigh them, and place on estimate upon their labors. Those who are not, are suspected of being vain, or having some selfish end to accomplish. Almost any one could have undertaken to write an autobiography better than Dr. Caldwell. Possessed by nature with an austere, haughty bearing, a great regard for what he imagined to be his own, and a strong disposition to excel in his undertakings, he has been regarded as being cold in his attachments to men, unnecessarily contentious about his rights, and unscruplous in the means by which he attempted to enforce them. How far, or to what extent such charges are true, our means of knowing are limited. After, however, reading the volume before us, we become impressed among other things, not with the effort the author makes to take to himself an unusually high position with reference to every matter in which he took a part, but with the automatic movements of an intellect that could establish that conviction and no other. Such a result flowed partly from his organization, and of it he was not entirely unconscious. Indeed, in several places where he relates incidents in which he was conspicuous, he hints pretty openly that every man has a right, and it is his duty to praise himself when he deserves it. He knows best his own merits, and why not set the example in the way of having them estimated? Besides tendencies uncontrollable, Dr. C., wrote at a period in life in which there is usually the least supply of that very scarce article called modesty. An octogenarian when he wrote his book, he like most aged men perhaps over-estimated himself and his labors. His mind dwelt upon the past. Indeed all old men live in the past, young men in the future. He had written voluminiously and on a great variety of subjects; and at a period when controversy took the place of research, and theory that of fact. What more then could be expected than that he should feel that he had occupied an important place in the history of the profession—and that he should wish to so make it appear.

Another impression that is irresistible to any one who reads his own account of his movements through life, is that he did not possess an over-stock of discretion. Things new, it mattered not how intangible or inappreciable, his mind seized upon as a "lead" to a mine of truth, and he often, after fighting his way to it, found a "mare's nest" from which he was glad to make a retreat. When he took a position his adherence to it was governed more by the opposition it met with, than the truth it contained. He fought for the details of mesmerism and phrenology not only until his opponents were quieted, but until the stench from the putrified rottenness of these isms themselves, drove him from the field. His prospects while in Philadelphia, were good at one time for succeeding Dr. Rush in the chair of Theory and Practice in the University, a position to which he ardently aspired, and for which he was in most respects the best qualified of any his rivals,—but the means he adopted to accomplish the purpose, were anything else than well selected.

He reports, for example, a fuss he had with Dr. Rush, his preceptor, at the time he read his Thesis, which, allowing his own account of it to be true, was unnecessary, improper, disrespectful, and well calculated to give Dr. Rush, who was a model of purity and propriety, a bias against him. Such too, doubtless was its effect, for Barton, who was much Caldwell's inferior, received the appointment.

In the establishment of the Kentucky Schools of Medicine, Dr. Caldwell took a leading part, for which he is entitled to gratitude. The Transylvania University and also the Louisville University, in their origin shared largely of his labors In speaking of these matters, however, those who were associated with him in his efforts, and without whose coöperation nothing at all could have been accomplished, are made to occupy a position rather too much in the back ground for good taste in even drawing pictures.

The connection he sustained to the Louisville University is made to occupy a prominent place in his auto-biography. In this institution he closed his labors as a teachers of Medicine. It was here we first made his acquaintance. When we saw him we thought him too far advanced in years to be profitable as a teacher, though he continued lecturing to the large classes of that institution for several years afterward. Conscious that the feeling was becoming general that he ought to be superannuated, he went to work and got up a very excellent lecture on the Influence of Age on the Intellect, designed apparently to show that he himself, although an octogenarian at the time, or bordering upon it, was still *compos mentis.* This did not stay at all the feeling that had become somewhat general, that younger blood ought to take his place, and as a consequence he resigned, embittered very much in feeling against his late colleagues. To this he gave vent with his tongue and pen,—made charges general and special; these nevertheless at the time were met and refuted, and that too by testimony which was very acceptable to the public, and we could see no reason why it should not have been so to Dr. C. himself, for partly it was *his own* given in relation to the same matters at times when not in a state of irritation.

It is presumable that every one who writes an autobiography, imagines that by so doing he will detail things that will make the race wiser and better. If his own life approach in any respect the character of a model for good, the expectation may be realized. In the case before us, there are some good things mixed up with a great deal that had better never been said. Among the opinions that are worthy and well expressed are those relating to the course which all those who have aspirations should pursue. According to the author's experience, where one individual has succeeded to fame purely on account of his natural gifts, ninety and nine have done so by industry and energy. Temperance, regular habits of study, exercise and discipline of the faculty of observation, are what can be relied upon with confidence to carry the student to the goal of his ambition. Throughout a long life the author was strictly temperate, and, what was of equal importance, systematic in his intellectual pursuits. One of his maxims was, "Never put off for to-morrow what you can do to-day." Another one equally valuable was, "Do what you undertake to do, well."

What estimate posterity will place upon the writings of Dr. Caldwell remains to be seen. Much that he has written he has lived long enough to see superseded, and the rest occupies a secondary place in the literature of the times.

A fault with him was, that he wrote too much; another one was that he wrote on subjects speculative, and concerning which man will never know anything until his nature is changed. Nor is Dr. Caldwell the only author of our country who has committed the former of these errors. The rage for producing *quantity* and *variety* almost amounts to a literary epidemic among our Medical writers; *quality* and elaborateness seem in their estimation to be among the minor qualities. What are the results? Their works are superseded by those of foreign origin. We might point out a domestic work on Physiology, that fifteen years since was the best perhaps in the language on that subject. It was written in a lucid style, and was, at the period when it made its appearance, up to the times. But the author instead of entering the field of experiment, and keeping himself posted on what others were doing throughout the world, turned his attention to the compilation of other works, for which he had less capacity, and he has now the mortification to see his work on Physiology displaced by one of foreign origin, and from present appearances he will live long enough to see some five or six others that he has compiled, share the same fate.

We might allude to others who are doing the same thing, and who, from present indications will be partakers of the same up-hil kind of joy.

The late Dr. Drake was a model of propriety in regard to book-making. Concentrating his entire energies on a single branch of medical science, he has accomplished what will give him character as long as physic is cultivated. In the field that he selected, he found sufficient to occupy his mind—enough to absorb all the industry and energy that he was able, during a long life, to command, and he passed from among us, regretting that he had achieved so little in the department in which it was his ambition to be useful.

One branch is enough for any individual, and often more than he can elaborate in a manner that is acceptable to the medical taste of the age. Fifty ounces of brain might be dissolved in the ocean, but would the power be increased in any respect by the process? Or rather, would it not be diminished, rendered more impalpable, intangible, inappreciable?

In reviewing his labors, and that too at a period the most proper for placing a right estimate upon them, our author was convinced that a prime mistake he had committed, was that of writing on too great a variety of subjects. Had he concentrated his energies, nothing could have prevented him from a place among the very first.

Considered in most respects, Dr. Caldwell must be regarded as an extraordinary man. He had his weak points and his strong ones. But few men, but what surpassed him in policy, and the social exterior towards his fellows. He was vindictive to weakness and possessed a morbid love of controversy. In early life he undoubtedly imitated Johnson and Gibbon, and hence his style, although at first grandiloquent, has about it the volume, smoothness and strength of these masters in composition. Besides, he was learned, and few men exceeded him in ratiocination. Accustomed to deal some in sophistry himself when engaged in building up a particular theory, he readily recognized the armor when his opponent put it on, and never failed to unmask and destroy him, sometimes by a single blow. If he ever lost anything in his numerous controversies it was not his fault, but the fault of his subject. When his positions were susceptible of proof, no man could roll up the syllogisms with more facility. Nature cut him out for argumentation and he improved his "talents."

A Practical Treatise on Foreign Bodies in the Air Passages. By S. D. Gross, M. D., Professor of Surgery in the University of Louisville, author of "Elements of Pathological Anatomy," &c., &c. Philadelphia: Blanchard & Lea. 468 octavo pp. For sale by Riley & Co.

This is a work on a subject of utility, and has for its basis not the author's experience merely, but collective experience—the experience of the profession as far as it was practicable for the author to get at it.

The first chapter is taken up with general considerations, in which the following propositions are discussed :

1. Nature of Foreign Bodies that may enter the Air-passages.
2. Alterations Foreign Bodies may undergo in Air-passages.
3. Situation of Foreign Bodies in the Air-passages.
4. Manner of entrance of Foreign Bodies into the Air-passages.
5. Expulsion of Foreign Bodies from the Air-passages.

The rest of the work is included in sixteen chapters and a general summary, in which almost every thing relating to symptoms, pathological effects produced, diagnosis, spontaneous expulsion, Medical and Surgical Treatment, are considered. Besides, there is a list of illustrations accompanying the work, designed to give a representation of the forms, &c., of the various substances which have been extracted or expelled; and also of the instruments necessary when there is a resort to an operation.

We have not the space in this No. of the *Journal* to follow the author over the ground which he occupies in the chapters to which we have referred. In most of them we find matter that would be very acceptable to our readers, and that would give us pleasure to transcribe to our pages, but we must be content for the present with a mere notice of some of the more practical points.

The diagnosis is discussed with care. The author says:

"Although the symptoms which denote the intromission and presence of a foreign body in the air-tubes are, in general, sufficiently well-marked to enable us to arrive at a satisfactory conclusion regarding the true nature of the accident, yet occasionally the most thorough examination of the patient and the most minute inquiry into the history of the case fail to afford the requisite light for the formation of a correct opinion. Such a state of uncertainty is always to be deeply lamented, for it is not only a source of great and painful embarrassment to the practitioner, but it may be, and indeed often is, followed by the worst consequences to the poor sufferer, inasmuch as it prevents the prompt employment of such means as are necessary for his safety and relief. It is for this reason that every case, involving the question of the presence of a foreign body in the air-passages, should be most carefully investigated at the earliest possible moment, in order that no time may be lost in applying the proper treatment, and thus obviating the risk of suffocation from the long and mischievous sojourn of the obnoxious substance in structures so essential to the well-being and the life of the individual. The rule, in all cases of this kind, is to act in the most prompt and efficient manner, on the well-known principle that, although the foreign body may not immediately prove fatal, yet the longer it is retained in the parts, the greater will be the probability that it will ultimately destroy the patient, by keeping up an amount of irritation, the effects of which the respiratory apparatus and the system at large cannot permanently resist. I have repeatedly experienced this state of uncertainty, and have no doubt it has often been felt by others."

The presence of extraneous bodies in the respiratory organs, give rise often to symptoms very much like what may be produced by croup, whooping-cough, ulceration of the larynx and trachea, aneurism of the aorta, worms in the intestines, and the lodgment of substances in the pharynx or esophagus.

Among the signs which indicate the presence of foreign bodies in the air passages, there is one which, when present, may be regarded as pathognomonic: the noise produced by the substance as it passes up and down during inspiration and expiration, from the bronchia to the larynx. This sound, in a case that we witnessed of a boy six years of age, was so audible as to be heard at some distance.

Two cases of foreign bodies in the trachea, occurred a few weeks since in the practice of Dr. T. W. Jones, of Bloomfield, Pickaway county, Ohio, in both of which this symptom was present—of course it would be most likely to be present in cases where the foreign body consisted of a grain of corn, a bean, pebble, or something else which, from its weight, would not be likely to become imbedded in mucus or sacculated. It can readily be imagined that light substances would not be so apt to be attended with such a sound. Auscultation would then be the most available diagnostic measure.

A very important question generally arises after the presence of the foreign body is satisfactorily ascertained, viz: shall an operation be immediately performed? The substance may be spontaneously expelled, or it may be expelled by the use of emetics, sternutatories, or by the inversion of the patient's body. A table of 49 cases followed by spontaneous expulsion, with recovery, is given by the author, in 37 of which the foreign body was expelled while in the act of coughing; also a table of 8 cases of spontaneous expulsion, followed by death. The period during which the foreign body may remain in the air tubes after the first symptoms have passed off, varies, according to these tables, from a few minutes to weeks, months or years. In one case, the substance—a piece of bone—was retained sixty years.

The author gives 46 cases in which *emetics* were unsuccessfully employed; and he states that personally he has no experience with them, for he has never in a single instance resorted to their use.

Nothing can be learned, as far as we can see, from this table, unless there was something with which it might be compared. It shows that 46 patients have died where emetics have been used. It would not be difficult to show, we presume, by the experience of almost any practitioner, that 49 cases of ague have died after quinine had been used.

Sternutatories are considered at length, and *one* case given in which they proved efficacious. The author, however, thinks them entitled to but little confidence.

Inversion of the body as a means of removing or getting clear of the foreign substance, is noticed, together with the danger connected with the measure.

Chapter IX is devoted to Surgical Operations, and we transcribe a few of the author's remarks on this important portion of the work:

"A careful examination of the facts which are comprised in this treatise, will, I think, serve to satisfy any one, however prejudiced or skeptical, that the only real safety of a person, laboring under a foreign body in the air-passages, consists in bronchotomy. We have seen, it is true, that various substances, entrapped in these passages, may be ejected, either spontaneously, or through the intervention of art, as the use of emetics and sternutatories, or even by simple inversion and succussion of the body; but no one, surely, acquainted with the subject, would adduce such cases for the purpose of establishing a rule of practice. They are the exceptions, not the rule, and, as such, they are valuable and worthy of consideration. As long as the extraneous substance remains in the windpipe, the patient, as has been already repeatedly stated, is in constant danger of being suffocated; or, if he escape so horrible a death, of perishing from inflammation and its consequences. The proper practice, therefore, is, in all cases, without exception, to perform bronchotomy as soon as possible after the occurrence of the accident. The artificial aperture effectually prevents spasm of the muscles of the larynx, and thus enables the patient to breathe with greater freedom, at the same time that it permits the foreign body, if it do not escape entirely, to play up and down the air-tubes with perfect impunity. In many cases, however, the foreign substance is expelled as soon as the windpipe has been properly opened, being often projected to a considerable distance from the patient's body. In general, it escapes at the artificial orifice, but sometimes it passes through the glottis, and is either expelled by the mouth, or it descends into the stomach. The ejection is occasionally delayed for days, weeks, and even months after the operation, and even after the closure of the wound. Under such circumstances, a second and even a third operation may become necessary, as in several of the cases mentioned in this treatise."

What to observe at the Bed-side and after death in Medical cases. Published under the authority of the London Medical Society of Observation; second American, from the second and enlarged London edition. Philadelphia: Blanchard & Lea. (For sale by Riley & Co.,) 1855, pp. 228.

The London Society of Observation, felt, very early after its organization, the necessity of some plan by which the labors of analyzing and comparing clinical observations might be greatly lightened, and the precision of the observations themselves increased. Dr. Walshe undertook a form of arrangement, and in connection with the committee appointed by the society has framed the little volume before us, which is in every respect creditable to all concerned in its composition.

The work embraces, Part 1st, Clinical Examination of a Patient; Part 2d, Examination of a Body after Death, and an Appendix.

Under these divisions are considered, with reference to Part 1st:

1. The personal description of the patient in health.
2. The previous history of the patient.

3. The causes of existing disease previous to the patient coming under observation.

4. Condition of the patient at the time of observation.

5. Treatment.

With reference to Part 2:

1. Points to be ascertained and noted, prior to commencing an examination.

2. Points to be noted during examination.

To physicians just commencing business, and who wish to form close habits of observation, this little volume will be very serviceable. Indeed it is just the thing they need—something that will suggest to them the points most important.

Is not the fact that we have so few who write out their observations, attributable in part to a want of habit in early life of making themselves familiar with every circumstance that usually characterizes diseased action?

This book ought to meet with a rapid sale.

The Principles and Practice of Obstetric Medicine and Surgery, in reference to the Process of Parturition, with sixty-four plates, and numerous wood-cuts. By Francis H. Ramsbotham, M. D., Fellow of the Royal College of Physicians of London; Obstetric Physician to the London Hospital, and Lecturer on Forensic and Obstetric Medicine at the London Hospital Medical College, lately Physician to the Royal Maternity Charity of London, etc., etc. *A New American Edition, Revised by the Author, with Notes and Additions.* By Wm. V. Keating, M. D., A. M., Lecturer on Obstetrics and Diseases of Women in the Philadelphia Medical Association, etc., etc. Philadelphia: Blanchard & Lea, 1855, octavo pp. 642.

This as it purports to be, is a New American edition, revised by the author, who has also made some additions to the former text. These relate to turning the child as a means of delivery under a contracted pelvis when the head presents, to the removal of the placenta before the fœtus when the os uteri is covered by that mass, —subjects which of late have occupied the attention of practitioners in both hemispheres. He has also, in the present edition, entered more fully into the connection between the maternal and fœtal systems; made an attempt to account for the establishment of the first drawn sob, and has introduced a second plate to illustrate the difference between the true and false corpus luteum.

It is unnecessary to say any thing in regard to the utility of this work. It is already appreciated in our country for the value of its matter, the clearness of its style, and the fullness of its illustrations. To the physician's library it is indispensable, while to the student as a text book from which to extract the material for laying the foundation of an education on obstetrical science it has no superior.

The present edition is got up in superior style by Blanchard & Lea, and is on sale at the Book Store of Riley & Co.

PART FOURTH.

EDITORIAL AND MISCELLANY.

OHIO STATE MEDICAL SOCIETY.

This body holds its next annual meeting in Zanesville, on the first Tuesday of June, that being the 5th day of the month.

It is very desirable that there be a full attendance of the members from all the different portions of the State. Hitherto it has been too much the case that the annual meetings have been made up mostly of physicians residing in the more immediate vicinity of the place of meeting. This might, if continued, give to the proceedings something of a local character. The design of the annual meetings is, among other things, to have a summary presented of what has taken place in every portion of the State. Our epidemics not only shift their location, but assume new phases every year.

As a profession, it is important that we should know each other, in order to exchange views on the past and future. It is only by comparison that many things can be properly estimated, and it is only by concert of action that we can achieve what is most desirable. The medical history of Ohio is very far from being perfected. In many of its features it has scarcely been investigated at all. So true is this, that inquirers from a distance are all the time distributing circulars among us for information as it regards this, that and the other subject. Now, if we have matters in our midst that interest those outside of the State, of course they ought to interest us,—and what is more shameful than that we often know so little about such things ourselves as to be unable to give the required information?

Our profession owes what it is to industry properly directed. We can look back and see that if there had been no Hippocrates, no Galen, no Van Helmont, no Riverius, no Sydenham, no Boerhaave, no Sanctorius, no Fothergill, no Pringle, no Huxham, etc., we should now be in possession of scarcely anything with which to compare modern diseases. Take, for example, from us the single account that Sydenham has left us of the epidemics of his age—the 17th century—and see what a void would be left in the literature of epidemics. We have in our day a great variety of diseases, and a great variety of complications. Everything connected with their origin and progress, it is not merely our privilege, but our imperative duty, to record for present and future use. Knowledge of this kind is capital stock, that enriches our profession, strengthens the hands of its members, and ultimates in the happiest consequences to the race.

Our profession, compared with others, and with the sacrifices required, is now rewarded but poorly in many respects. Public confidence is at a low ebb, and the remuneration that the Physician receives for his services is often insufficient for a support. Revolution in things of this character is necessary, and it is not saying too much to say that it is practical. But to bring about the right results, requires effort--united effort--the effort of all the Physicians in the State.

SIGNS OF THE TIMES.

Into the future, near to it as we are, no one has ever been permitted to look; no faculty that we possess enables us to penetrate the dark mantle that hides it from our view. Constituted, however, as we are, something may be done in the way of ascertaining what "*will be*" from what "*has been.*" This rule, however, is oftener true with reference to the things of nature, than to those of art or society. Applied to Physics, it is indeed our most certain method of finding out what the future will bring forth; and, as a consequence, we may calculate with some confidence that the generation now in the womb of futurity, in physical conformation, etc., will not be very much different from the one now nursing in the lap of mother earth. Not, however, with the same certainty, can a rule be invoked in regard to the actions, moral, intellectual, and social, of those still behind the screen. Every age has furnished proof, some very abundant, of the changes which these departments undergo. Things not dreamed of in the last, have been developed in the present generation, and the next may be pregnant with some still more astonishing. Hazardous, then, must be all conjectures that involve future human actions.

Every individual has his period in life when he is a skeptic—when he doubts the goodness of his neighbors, and even the validity of the reasons why he should be an accountable being. The same thing is true of communities and nations, in regard to the utility of existing institutions. A whim comes over the public mind which leads to a disposition to change old things for new—things tried for those untried. It matters not how well an institution has answered the purposes for which it was designed, or how unlikely that anything better could be substituted in its place, the passion is irresistable, and will seek an expression, at the risk of destroying what has been consecrated, dedicated, and sanctified by the experience of fifty centuries, or the unerring teaching of the all-wise Being himself.

At the present time, a paroxysm of the kind has taken possession of the public mind, and has affected the interests of almost everything connected with the social state. It is not necessary to state the fact that Medicine—scientific Medicine—has shared largely of this trouble. Anatomy, Physiology, and Chemistry have been scouted as useless, and Practical Medicine itself denounced as injurious in its results to the welfare of the race. The breadth and depth of this feeling, there is every reason to believe, is greater now than at any former period of the world's history. Were it confined to the herd, it might be presumed that it would pass off without any great amount of injury to the cause of truth. Unfortunately, this is not the case. It extends to those who have position, those who have power to operate and carry out any scheme that ignorance and the desire for innovation may suggest. The legislative department of our country, at various points, during the last ten years, have given evidence of the extent to which it is effected, and has foreshadowed proclivities that the most careless observer cannot fail to interpret. Indeed we may look for offensive movements from a variety of quarters.

With such troubles before us, it is no easy matter for the profession to shape a course by which it will secure the greatest possible amount of immunity. But we are not united as we should be, an indispensable prerequisite to the perfection of schemes of defense. Concert of action implies union, and without the latter the former is impossible. Institutions for Medical education we have multiplied all over the land, but have incorporated in them too small a proportion of the elements that secure harmony and efficiency in results.

Nor is our membership in any better condition. Ambition for business too often takes the place of research, formality of etiquette that of kindness of heart, and obsequious studied mannerism that of genuine old-fashioned dignity—the bearing that arises from consciousness of purity of intentions.

To present a formidable front, to accomplish the greatest possible amount of good, our present condition requires to be looked into, to be closely scanned. Put away "dead heads" and "dead hearts;" give us working men, with good intentions, and the ship of Medicine will again weather the storm.

BENEVOLENT INSTITUTIONS.—The Benevolent Institutions of Ohio were never managed with more science and energy than at the present time. Those who have them in charge devote wholly their time and attention to them, perfecting them in everything that the experience of the age suggests. With the two new buildings erected at opposite points in the State, the accommodations in the future will be sufficient for most, if not all, the lunacy that occurs among us. The provision for the education of the Blind is also sufficiently capacious. This, however, is not true with reference to the building, facilities, &c., originally erected for the education of the Deaf and Dumb. At present a large number of applications, the Superintendent is compelled to refuse for the want of room. When this is seen to, we shall present as a State, this feature of civilization in a form of which any people might well be proud.

In future R. GUNDRY, M. D., will be connected with the Journal as Assistant Editor. The business department will remain as heretofore.

OHIO PENITENTIARY.—The Report of the Directors and Warden of this institution has been laid on our table for the past year.

The Medical aspect of this report is worth noticing on several accounts, but we have no time at present to allude to but one or two points. The number of convicts catalogued is 587. Of this number, there were seven deaths from December until June, a period of seven months; and 37 from June until November, a period of five months —making the mortality for the year 44.

In examining into the nativity of the prisoners, it will be found that 142, or about one-fourth of the whole number, are foreigners. This is a proportion much too large for the number of foreigners there are in the country. According to this statement, their proclivities to crime are about double that of those of indigenous origin. The moral regulation of the institution, although as perfect perhaps as it can be made under the present laws organizing it, requires a radical reform. Old prisoners, those hardened in crime, and from whom little, if any reformation can ever be expected, are now the companions of a class of juvenile offenders—boys from fifteen to twenty years of age. The tendency of this admixture, in spite of all the efforts practicable, must be everything else than salutary. These boys, if properly classified and cared for, would be amenable to efforts of reform, and the most of them, when their terms of service expire, would be returned to society as useful citizens.

A new institution, therefore, is indicated, in which shall be placed the juvenile offenders of the State. To say nothing about justice or benevolence, this measure is required by policy.

A Work on Mal-Practice.—Dr. Stephen Smith, of New York, one of the editors of the New York Journal of Medicine, announces that he has in course of preparation a work on Medical Jurisprudence, and he says it will greatly facilitate its completion for the press, if members of the profession will communicate to him reports of trials, facts in relation to suits threatened or instituted, etc., etc.

High Operation for Stone in Females.—Prof. W. Parker, of New York, reports three cases of adult females in which he successfully removed calculi by the supra pubic operation.

Report of the Sanitary Commission on the Epidemic Yellow Fever of 1853, *of the City Council of New Orleans.*—We have no space for an analysis of this report in the present No. of the Journal. The report embraces some 541 pages, and is accompanied with a sanitary map of the city of New Orleans. One thing will not fail to strike the reader in the perusal of this report. We allude to the immense labor and industry necessary to get it up. Such efforts in the past have never failed to be productive of the best results, and our Southern cotemporaries, if they persevere, may expect the same thing in the future. The day, indeed, is not far distant when yellow fever will be as fully unfolded as has been intermittent.

We of the North owe to our friends in the South a lasting debt of gratitude for keeping us well posted up in regard to the progress of some of the most interesting forms of disease with which the world has ever been visited.

Receipts for the Journal will appear in our next No.

On the Gastric Juice, and its office in Digestion. By John C. Dalton, Jr., M. D., New York.

Though the gastric juice has been more fully and perhaps more successfully studied than any other of the digestive fluids, there are still some contradictory statements with regard to it, even among authors of the first eminence. Since the admirable observations of Dr. Beaumont on the person of Alexis St. Martin, the secretion has been examined on the lower animals, by Blondlot, Schwann, Wasmann, Bernard, Lehmann, and others, whose researches have, in most essential points, confirmed those of the American observer. During the past year I have studied the gastric juice, at various times, by means of fistulæ, artificially established in the stomach of the dog, after the method of Blondlot and Bernard. The secretion was almost always obtained by feeding the animal with raw or cooked meat, after a twelve hours' fast, and collecting and filtering the fluid that ran from the fistula during the first half hour afterward. The statements of Dr. Beaumont in regard to the intermittent character of the secretion were always found to be correct. The stomach, in the intervals of digestion, contains only a colorless mucus, usually alkaline in re-action, though sometimes neutral.

The acid fluid begins to run by drops in about five minutes after the introduction of food, and in ten to fifteen minutes it flows freely—occasionally in a small stream—from the orifice of the fistula. It then runs so fast that four or five ounces can be collected from a medium sized dog in the course of half an hour. During the first five minutes of its flow it is sometimes colorless, but afterward it has a faint amber tinge, resembling that of pale urine or the serum of the blood.

A little confusion of ideas seems to have existed in the minds of some observers with regard to the best method of obtaining gastric juice in a state of purity. Several have thought this could be best accomplished by irritating the gastric mucous membrane with substances not liable to be attacked by the secretion ; as, for example, glass rods, metallic sounds, &c. Dr. Beaumont appears to have sometimes succeeded in obtaining a tolerably large quantity of fluid by this means. I have myself, however, never been able to obtain a sufficient quantity of the secretion in the dog by any other means than the introduction of food. The stomach will often refuse to secrete a single drop of acid liquor, though irritated almost constantly for a quarter of an hour by a metallic catheter. Other observers, also, subsequent to Dr. Beaumont, are all agreed that only a very small quantity can usually be collected by such means ; and yet they continue to recommend and employ the method, under an idea that the gastric juice so obtained will be "purer" than that procured in any other way. A moment's consideration, however, will show that the fluid which is secreted under the influence of so artificial and unnatural a stimulus cannot at all be relied on as representing the real gastric juice ; and that the only proper method of obtaining this is to present to the stomach its natural stimulus, viz : the food which its secretion is intended to digest. The mistake, however, has been frequently made, and will undoubtedly account for some incorrect statements with regard to the specific gravity of the gastric juice, its noncoagulability by heat, &c. Frerichs, for example, in *Wagners' Encyclopedia of Physiology*, (Art. *Digestion*,) directs that, in order to obtain a "pure" gastric juice, the animal in whom gastric fistulæ have been established "should be fed, while fasting, with *indigestible substances*, *pebble-stones*, *pepper-corns*, *&c.*, and the fluid from the stomach then examined." A singular attempt, certainly, to excite a "normal" secretion by means of substances which are altogether foreign and unnatural to it, and with which it has no physiological relation. The truth is, these authors make a pure assumption when they regard the fluid so collected as more "normal" than that obtained by other means. They do not seem, either to attach sufficient importance to the fact that these irritants can at best produce only a very scant supply of the secretion. Frerichs himself says he has only been able to obtain in this way from forty-five drops to two drachms and a quarter of "pure" gastric juice. This is not surprising, since he employed the method least adapted to excite its secretion. The secretion of true gastric juice can, in fact, be excited only by food, and by those particular kinds of food which are to be digested by it. Loaf sugar given to the dog, will be dissolved and disappear altogether from the stomach, as I have repeatedly found, without causing any appreciable amount of secretion. The same thing may be said of starch paste, when given alone. I have even seen tough and indigestible pieces of tendon, introduced through the fistula, expelled again spontaneously, one after another, without causing the flow of a single drop of acid fluid; while cooked meat introduced in the same way, produced immediately a free secretion. It is evident, then, that to procure normal gastric juice, *i. e.* the fluid normally secreted during the process of digestion, we must make use of its natural stimulus; and we cannot hope to obtain it in any other way.

There are only two possible sources of impurity for the gastric juice taken from the stomach after the introduction of ordinary food. One is an admixture of saliva. This, however, is generally regarded as of little importance, and, at any rate, it is not to be avoided by any of the methods proposed as substitutes. Saliva is even liable to be swallowed in the intervals of digestion, when no food whatever has been taken. The other source of impurity, and that which has been thought more important, is the danger that the fluid taken from the stomach, even at the commencement of digestion, may have already dissolved some of the elements of the food, and thus present to the experimenter at complicated solution, instead of pure gastric juice. This, however, is not the case. If the animal be fed upon firm pieces of fresh meat, containing little blood—particularly if the fluids have been previously coagulated by a short boiling — a sufficient length of time elapses before solution begins for the experimenter to obtain an abundant supply of the unaltered secretion. The two principal products of digestion, albumen and albuminose, may be readily detected if present; and experiment shows that they do not exist in the fluid obtained by this means. There is, then, really no objection to the employment of this method; which is, indeed, the only reasonable and physiological one.

Gastric juice, obtained as above, has the following properties: Its specific gravity is 10.10; its acid re-action is always decided; its viscidity is so slight as to be hardly noticeable; it becomes turbid by boiling, and by an excess of alcohol; it is not troubled by nitric acid, nor by ferrocyanide of potassium.

Its *organic ingredient,* concerning which so much has been said, is undoubtedly the most important of its constituents. Though it has never been separated in a perfectly pure state, its presence is easily demonstrable. It may be the altered mucus of the stomach, as Bernard supposes, or a mixture of various organic matters, as believed by others; but it is certainly a peculiar subtance, found no where else in the body, and essential to the digestive properties of the gastric juice. There seems no good reason why we should not retain for it the name of *Pepsin,* first given to it by Schwann; always recollecting, for the present, that this name does not indicate its chemical character or origin, but only its physiological destination. The pepsin resembles albumen, as stated by Robin and Verdeil, it being coagulated by heat. Lehmann and Frehrichs are certainly in error when they assert the contrary; an error into which they have perhaps been led by regarding as true gastric juice an unnatural fluid, obtained by the unnatural means alluded to above. The coagulum thrown down on boiling fresh gastric juice is not albumen, as Lehmann intimates, since it is not precipitated by either nitric acid or ferrocyanide of potassium; and after gastric juice has been boiled and filtered it has lost its digestive power, though its acid re-action remains unaltered.

With regard to the *mode of action* of gastric juice, it may be confidently stated that it acts only on the albuminoid substances, and articles of food containing them—as meat, eggs, bread, nutricious vegetables, &c. It is also true that these matters are mostly converted by the action of gastric juice into albuminose, *i. e.* a substance which is not coagulable by heat or nitric acid, but which is best precipitated by an excess of alcohol. If the different articles of food be digested in fresh gastric juice in test-tubes, at a temperature of 100° F., it will be found that the digestible ingredients of bread are all taken up under the form of albuminose. If cheese be treated in the same way, its casein is altogether converted into albuminose, and dissolved, while its oleaginous matters are set free, and collect as a yellow layer on the surface of the solution. A very considerable portion of raw white of egg, however, dissolves in the gastric juice directly as albumen, and remains coagulable by heat. Soft-boiled white of egg and raw meat are principally converted into albuminose, but at the same time a small proportion of albumen is also taken up unchanged.

The gastric juice *actually dissolves the articles of food.* This has been through some mistake, recently denied by one observer, so far as regards muscular tissue; the fibres being supposed to be simply swollen and partly disintegrated, but not actually dissolved in the stomach. The contrary, however, can be readily seen, by digesting raw meat, cut into small pieces, with fresh gastric juice, at 100° F., for eight or nine hours. The filtered fluid which is perfectly clear, but rather more deeply colored than at first, has increased in specific gravity from 1010 to 1020, or 1022; and, by the addition of six or eight times its volume of alcohol, becomes excessively turbid and opaque, like thin milk. It is true that all parts of muscular tissue do not dissolve; and there remains constantly, at the bottom of the test-tube in which the digestion has been formed, a pulverulent, brownish sediment, consisting of the undigested portions of the meat. This is the case, also, with boiled white of egg. While the digestion is going on, it is easy to see that as the general mass of the fragment becomes transparent and gradually liquefies, there remain scattered through its substance, numerous minute opaque spots which are not acted on; and which, when set free by the solution of the rest, produce an opalescence in the fluid, and collect slowly as a sediment at the bottom. Whether these refractory portions are afterwards dissolved by the intestinal fluids, or whether they are altogether indigestible, and destined to be discharged with the excrements, is at present uncertain.

The *quantity of albuminoid matter dissolved by the gastric juice* has been variously stated. The method which I have adopted to determine this point is the following: it was first ascertained that the fresh lean meat of bullock's heart loses by desiccation 78 per cent. of its weight; 300 grains of such meat, cut into small pieces, were then digested for ten hours in ʒiss of gastric juice at 100° F., the mixture being agitated as often as every hour. The meat remaining undissolved was then collected on a previously weighed filter and evaporated to dryness. When perfectly dry it weighed 55 grains. This represented, allowing for the loss by evaporation, 250 grains of the meat in its natural moist condition; 50 grains of meat were then dissolved by ℥iss of gastric juice, or a little over 30 grains per ℥j.

From these data, we can form some idea of the large quantity of gastric juice secreted during the process of digestion. One pound of raw meat is only a moderate meal for a medium sized dog, and yet, to dissolve this quantity (supposing the whole of it to be digested,) no less than sixteen pints of gastric juice will be necessary. This quantity, or any approximation to it, would be altogether incredible if we did not recollect that the gastric juice, as soon as it has dissolved its quota of food, *is immediately re-absorbed*, and enters the circulation with the alimentary substances which it holds in solution; so that a very large quantity of the secretion may be poured out during the digestion of a meal at an expense to the blood, at one time of only two or three ounces of fluid. The simplest investigation shows that the gastric juice does not accumulate in the stomach in any considerable quantity, to remain there until the solution of all the food has been accomplished, but that it is gradually secreted so long as any food remains undissolved; that portion which has been already digested being disposed of by a re-absorption with its solvent fluid. There is, then, during digestion, a constant circulation of gastric juice from the vessels to the stomach, and from the stomach back again to the vessels. Or perhaps it would be more correct to say that it is only the watery portions of the juice, holding sometimes in solution the digested albumen and albuminose, that perform this circulation; while its acid and organic ingredients remain very possibly in the stomach, ready to act on a new quantity of food, as that which has been already digested is withdrawn by absorption. That this is really the case, is proved by the following facts:—First, if a dog be killed some hours after taking a meal, there is never more than a very small quantity of fluid found in the stomach, just sufficient to penetrate and smear over the half digested pieces of meat; and, secondly, in the living animal, gastric juice drawn from the stomach when digestion of meat has been going on for six hours, contains little or no more organic matter in solution than that extracted fifteen to thirty minutes after the introduction of food. It has evidently been freshly secreted; and, in order to obtain gastric juice saturated with alimentary matter, it must be artificially digested with food in test-tubes, where this constant absorption and renovation cannot take place.

The time necessary for the digestion of food varies apparently in different species of animals. In the dog, one pound of lean uncooked meat is completely digested, and disappears from the stomach, only in from eight to nine hours. From experiments of M. Colin, of the Veterinary School at Alfort, it appears that the process is equally long in the cat; and probably, in all the purely carniverous animals. Dr. Beaumont, on the contrary, found in Alexis St. Martin, meat and bread were digested in five, four, and three hours, and even, in some instances, in an hour or an hour and a half. This difference is undoubtedly in part owing to the influence of mastication, which is so very imperfectly performed in the carnivora. It might be supposed that, having constant opportunity of obtaining gastric juice from the dog, and of studying its effects in artificial digestion, we might easily determine the relative digestibility of the different articles of food used by ourselves. This, however, is not the case. The readiness with which a substance dissolves in gastric juice is only one element of its digestibility in the stomach. This depends also on the readiness with which it excites the secretion, and stimulates the peristaltic movements of the organ, the ease with which it disintegrates, the amount of previous mastication, &c. For the human species, then, the digestibility of the various kinds of food can be properly determined only by direct observations on the human stomach, like those of Dr. Beaumont; and it will probably be long before we shall have any others so valuable, in this respect, as his.

Amylaceoas substances are not digested in the stomach. It is easy to ascertain that cooked starch, artificially digested for ten hours in gastric juice, at 100° F., still exhibits its characteristic re-action with iodyne. Bernard also maintains that it is equally unaffected in the stomach. Some writers, however, have thought that the well-known property of saliva in converting starch into sugar, would be exerted even in the stomach during the process of ordinary digestion. Lehmann, for example, states that "sugar may be detected, by the ordinary means, in the stomach of the animal (with gastric fistula) in ten to fifteen minutes after it has followed balls of starch, or after they have been introduced through the fistula." I am at a loss to understand the grounds of the assertion, as I have never met with similar results. Either cooked or raw starch, administered mixed with meat or introduced alone through the fistula (the animal will not eat pure starch) is easily recognizable by its re-action with iodine, ten, fifteen and thirty minutes afterward. In forty-five minutes it is diminished in quantity, and in one hour has almost invariably disappeared ; but no sugar is to be found at any time. Outside the body, too, gastric juice entirely prevents the saccharine conversion of starch by saliva. A thin solution of boiled starch, mixed with an equal quantity of saliva, and kept a 100° F., is completely converted into sugar in ten to fifteen minutes ; but if an equal quantity of fresh gastric juice be previously added to the mixture, there is no trace of sugar, even at the end of three hours, and the starch retains its usual properties. It must be acklowledged, therefore, that though saliva converts starch outside the body, when digested alone in test-tubes, yet it does not have this effect, so far as we can ascertain, during the natural process of digestion in the stomach.

Cane sugar is slowly converted by gastric juice, outside the body, into grape. Two grains of cane sugar, dissolved in half an ounce of gastric juice, and kept at 100° F., gives traces of glucose at the end of two hours, and in three hours the quantity of glucose is considerable. It cannot be shown, however, that the gastric juice exerts this effect on sugar during ordinary digestion. If cane sugar be given to the dog while digestion of meat is going on, it disappears in from two to three hours, without any glucose being detected. There is a singular peculiarity, however, in the action of cane sugar, introduced into the stomach of the dog while empty. If half an ounce of loaf sugar be given to the animal after a twelve hours' fast, when the stomach contains no food or gastric juice, it almost invariably produces an immediate reflux of intestinal fluids (among which the bile is readily recognized by its color,) and these promptly convert a part of the sugar which has been swallowed, so that in fifteen to thirty minutes the fluids extracted from the stomach contain an abundance of glucose. This, however, is only temporary. In forty-five minutes to an hour, the intestinal fluids cease to be present, and the glucose at the same time disappears. Unaltered cane sugar, however, still remains and continues present for two and a half to three hours, when it gradually disappears without any subsequent production of glucose. During all this time, as has been mentioned above, no gastric juice is secreted, the re-action of the stomach remaining constantly neutral or alkaline.

The above experiments render it probable that even when cane sugar is taken with other articles of food, it is not converted into glucose in the stomach. We cannot, however, be perfectly sure of this, owing to a circumstance not generally known, viz: that the presence of the gastric juice interferes with Trommer's test for grape sugar. If a drop of honey be mixed with a drachm or two of gastric juice, on adding sulphate of copper and potassa, the solution takes a rich purple color, and on boiling, changes to yellow—but no copper is deposited. A mixture of honey and gastric juice, in equal volumes even, does not reduce the copper unless it be previously diluted with water; in that case the copper is deposited as usual. I have not been able to ascertain upon what ingredient of the gastric juice this singular property depends. It is not its free acid, since, if previously neutralized by potass, it still behaves in the same way. It is not its organic ingredient, since if this be separated by boiling and filtering, it continues to act as before. Even the addition of several times its volume of alcohol does not altogether prevent the interference. A considerable proportion of glucose may still be recognized, notwithstanding the presence of gastric juice, by the change of color from purple to yellow above mentioned, though there may be no precipitate; but a small proportion does not show itself in any way. One-sixteenth of a drop of honey in one drachm of gastric juice produces no change of color that could at all be relied on as a test; while the same proportion of honey in water reduces the copper promptly and abundantly. We cannot, therefore, detect a moderate quantity of glucose in gastric juice by this means.

It is universally agreed that oleaginous substances are not attacked by gastric juice, but are simply set free from their union with other matters. Thus, if adipose tissue be digested artificially, the walls of the fresh vesicles, with the areolar tissue, are dissolved, and the oil collects a distinct layer on the surface. The oily matter of cheese acts in the same way, as already noticed. Boiled yolk of egg digests in a similar manner. Its albuminoid ingredients are dissolved out, while the fat collects at the top of the solution, as a mass of yellowish semi-solid granules.—*Buffalo Medical Journal.*

Prize Essay for Cholera Infantum.—The undersigned, a committee appointed by the New York Academy of Medicine, hereby give notice that a prize of one hundred dollars will be awarded to the author of the best essay on Cholera Infantum.

Each communication must be accompanied by a sealed packet, containing the name of the author, which will be opened only in the case of the successful competitor. Unsuccessful communications will be returned, on application, after April 1, 1856.

Communications must be addressed (post-paid) to the Chairman of the Committee, Dr. Joseph M. Smith, No. 11 East 17th street, New York, on or before the 1st of January, 1856.

New York, February 23, 1855.

Joseph M. Smith, M. D.
Isaac Wood, M. D.
H. D. Bulkley, M. D.
John W. Corson, M. D.
S. S. Purple, M. D.

Differential Diagnosis of Syphilitic and Non-Syphilitic Disease of the Testicles.—Dr. Markoe, of the New York Hospital, in a lecture, thus contrasts the two in the Medical Times:

	SYPHILITIC FORM.		NON-SYPHILITIC FORM.
1.	Begins in testicle.	1.	Begins in epididymis.
2.	Smooth and regular.	2.	Irregular and knobbed.
3.	Hard and painless.	3.	Less hard and more painful.
4.	Scrotum unaffected.	4.	Scrotum early adherent.
5.	Both testicles involved.	5.	Usually one only.
6.	Hydrocele very common.	6.	Hydrocle rare.
7.	No supuration or fungus.	7.	Abscess or fungus common.
8.	No glandular affection.	8.	Glands of groin enlarged.
9.	Venereal appetite gone.	9.	Not ascertained.
10.	Treatment successful.	10.	Treatment unsatisfactory.

Impromptu Tracheotomy.—It occurs occasionally to the medical practitioner to be called on, unprepared and unfurnished with the proper instruments, to perform the operation of tracheotomy. It may not, therefore, be amiss to state what may be done on such an emergency. A pair of pointed scissors exists in every case of instruments, and in every house. With these the integuments over the trachea may be divided, and, the points brought together, the trachea pierced; the points being duly separated, a horizontal, longitudinal opening is made. If the case be extremely urgent, the handle of a teaspoon may now be inserted, and turned one quarter round; the opening is then patent, and the patient, if previously struggling for breath, is relieved, perhaps saved.

To render the tracheal orifice permanently patent, a portion of the tissues surrounding and composing the orifice may be included in a loop of cotton, at four opposite points, and the cotton may be drawn tight, and fastened to a ring of wire, tin, whalebone, cane, or even card. If all these are absent, the pieces of cotton may be readily tightened by the operator and an assistant.

In this manner, life may be saved in the case of choking, and in other cases of laryngismus.—*Lancet.*

How to Test the Genuineness of Cod Liver Oil.—We possess in sulphuric acid a simple re-agent by which genuine cod liver oil is easily distinguished from other kinds of oil. A few drops of this acid produce, in olive oil, a dirty, grey color; in poppy oil, a deep yellow color, approaching brown; and in ordinary fish oil, a deep brown color; while poured drop by drop into cod liver oil, sulphuric acid produces in it a centrifugal movement, particularly where the drops fall, and, at the same time, a beautiful violet color, which changes to purple the moment the mixture is agitated, and ultimately to a rich sienna brown. This color is no doubt due to the action of the sulphuric acid on the constituents of the bile contained in the oil. The action of the re-agent is best seen by adding one or two drops of concentrated sulphuric acid to about half a teaspoonful of the oil, spread out upon a white porcelain plate.—*Lancet.*

Emetics in Tooth Ache.—M. Cæsar Fredericq, of Ghent, has directed attention to a variety of tooth-ache, which is indicative of a disordered state of the stomach, and which he has succeeded in relieving by the administration of ipecacuanha in emetic doses. He has seen this treatment succeed where everything else had failed, and where even the removal of the diseased tooth produced no effect.—*Ib.*

Pumpkin Seeds for Tape Worms.—A sufficient number of cases have been reported to show that the emulsion made of Pumpkin seeds possess some real efficacy as a remedy for the expulsion of tape worms.

The usual mode of using it, is to remove the rind from the seeds, bruise the latter in a mortar, and infuse them in water in the proportion of two ounces of the seeds to half a pint of water. After standing a few hours, the whole assumes the form of an emulsion, or thick mucilage. The whole of this should be taken by an adult, in the morning fasting; and two or three hours after, sufficient castor oil should be given to move the bowels freely. If the dose does not cause expulsion of the worm, repeat the same the following morning. —*North Western Med. and Surg. Journal.*

A Genuine Reform.—We have before us a copy of the Type of the Times, published in Cincinnati, O., by Longley & Brothers, a firm of five young men of energy, who are engaged in promoting the Phonetic or Spelling Reform, by the publication of Books and Periodicals in the reformed and scientific orthography. The "Type of the Times" is a mammoth sheet, of good paper, well printed, and made up into sixteen four-column pages, convenient alike for reading and preservation. A limited portion of it is printed with the new Alphabet, which any one can read after a few minutes observation; but the body of the paper is filled with judiciously prepared matter, in the common spelling, for the patronage of the reading public.

By the list of Phonetic Books advertised in the "Type," we judge the Spelling Reform is making permanent progress. Besides a series of Phonotypic School Readers, and instruction books for the study of Phonetic Shorthand, we observe the New Testament, Biographies of the Presidents of the U. S., and their portraits, an essay on Money Getting and Money Spending, &c. There is also in course of publication a large Phonetic Dictionary, to be ready by September next.

The merit of this system consists in having a distinct letter for each sound in the language, and in always representing each sound by the same letter.

All that is necessary in learning to read, therefore, is to learn the characters, and the pupil is as sure to pronounce a word correctly, belonging to any other language, as he is the most common household word. What an advantage would this be to pupils, were it in general use, especially to those learning other languages. And what a vast amount of money and precious time it would save to be devoted to other objects. This steam and lightning age can not long abide the *oughs* and *aighs,* and the thousand and one other ridiculous contortions of the English alphabet to represent simple sounds. Brevity is one of the marked characteristics of the age, and if everything which has more length than depth, passes its gauntlet without losing a few of its last joints, it will be on account of its speed.

The price of the Type is $2,00, and such is the arrangement of the publishers for the present year, that every person subscribing for the paper will receive in addition, a premium in books, ranging from 50 cents to $3,00, according to the number of copies sent to his office, so that the paper alone will cost no one over $1,50, while many will receive in addition to their paper, one, two and three dollars worth of books. This may look unreasonable ; but we have no reason to doubt that it will be faithfully lived up to on the part of the publishers. The arrangement will pay them by the introduction which it will give to their publications throughout the country. Who will get up a club ?

A club of a dozen will receive a premium of from 75 cents to $1 each ; one of two dozen, a like premium of from $2 to $3 each.

Specimen copies will be sent gratis on application.

CINCINNATI RETREAT FOR THE INSANE.

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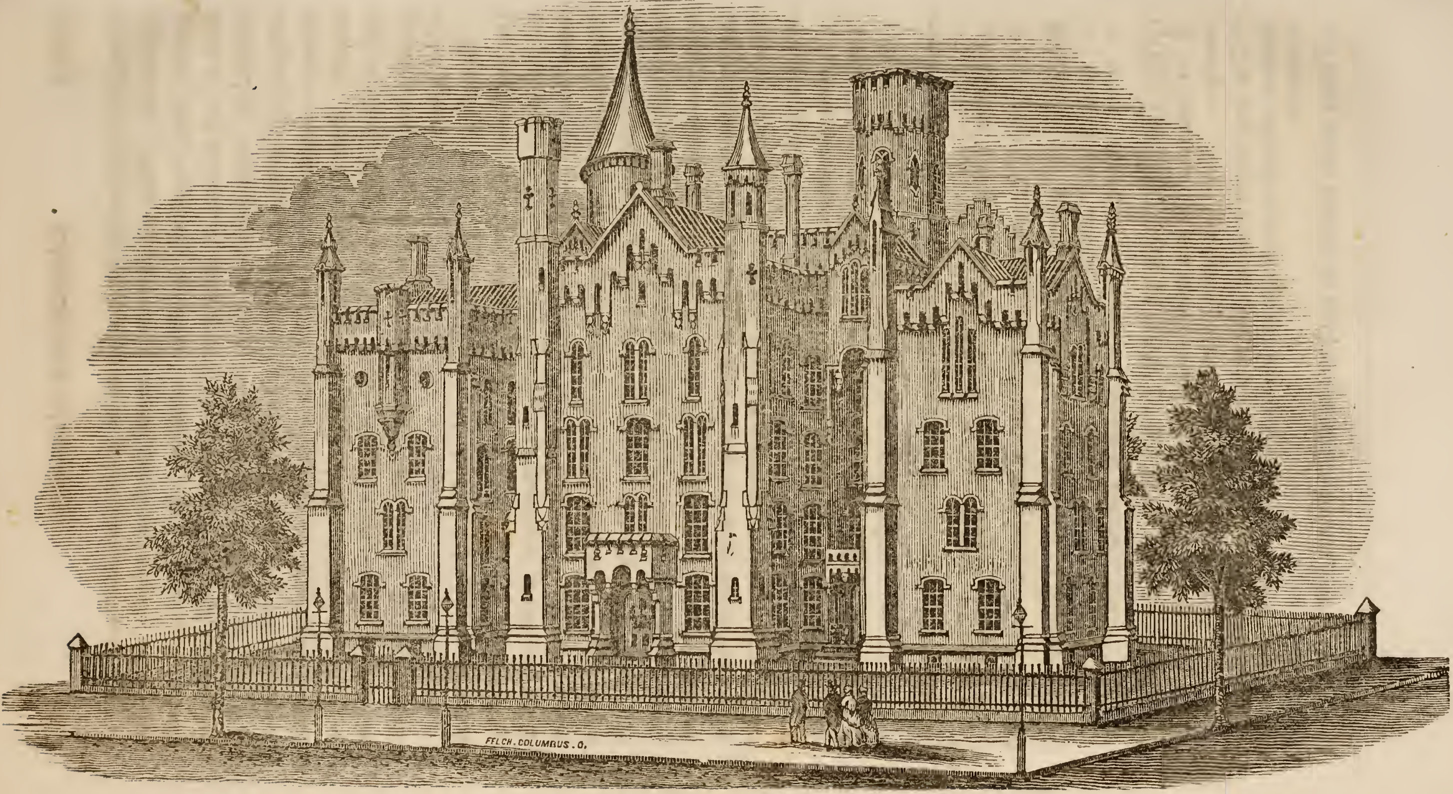
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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. 1.—*Systematic Quantitative Analysis of Urine.* By Theo. G. Wormley, M. D., Columbus, Ohio.

Every day's experience teaches us that the *urine*, in its Physiological and Pathological relations, may be looked upon as the best index of the manner in which various organs of the body are performing their functions. Unfortunately, the complex character of that fluid in regard to its chemical constitution, and the difficulties attending the methods of analysis, have heretofore prevented any but the scientific chemist from attempting its systematic investigation. Perhaps, however, no department of chemistry has made more progress in the last few years, than that of zoo-chemistry; within that time we have had methods given us for estimating many substances which formerly could not be estimated at all; or, only in a very imperfect manner. For example, it was not until recently that we had any reliable method of estimating the urea, which is one of the most important constituents of the urine. The methods formerly given of estimating it as oxalate, nitrate, and in many other forms, were, on account of the solubility of urea and its salts, both tedious and imperfect. The recent method by Liebig, however, is simple and accurate.

In the present article, we will take advantage of the more recent methods of analysis, and so give them in detail, as to render them perfectly plain and practicable. At the same time, we will give the method which we have followed for separating the various constituents, and the manner of distributing them according to their combining affinities. This will cause us to enter into many minute details, which, although well known to the skillful chemist, may be of use to those whose opportunities in this respect have been limited.

First, the *apparatus* necessary to pursue the analysis as we propose, will be as follows: a specific gravity bottle, a few Berlin evaporating dishes, a few beaker glasses, a small platinum crucible, a graduated tube, a balance, and a few small funnels; also, a small quantity of filtering and litmus paper.

The *reagents,** are caustic and nitrate of baryta, chloride of barium, nitrate of silver, nitrate of mercury, oxalic acid, bichloride of platinum, and chloride of iron; also, carbonate and caustic ammonia.

In making an analysis of the urine, the discharge of an entire day should be received into a clean vessel, and the amount noted, as also its reaction upon litmus paper. The specific gravity should be then taken at a temperature of 60° F. This is most conveniently done by means of a specific gravity bottle having a perforated stopper. It is scarcely necessary to add that the urine should be well agitated before taking its specific gravity. We may now proceed with the analysis.

Determination of the urea. ($C_2H_4O_2N_2$.) The urea is best determined by the process introduced by Liebig, that is, by precipitating it with the nitrate of mercury. Before we can apply this reagent, however, the phosphoric and sulphuric acids must be separated from the urine. This is best done by treating a certain amount, say 100 grains, with half its volume of a fluid containing, in every three volumes, two of a saturated solution of caustic baryta, (BaO, HO,) and one of the nitrate of baryta, (BaO, NO_5.) This will precipitate the phosphoric and sulphuric acids as phosphate and sulphate of baryta, and these salts are to be separated by filtration. To the filtered fluid we add, from a graduated tube, a solution of nitrate of mercury, of known strength, as long as it produces a precipitate. (The urine should be well agitated during the adding of the nitrate of mercury.) This precipitate will be white in color, and consists of one equivalent of urea in combination with four of the protoxide of mercury. ($C_2H_4N_2O_2, 4HgO$.) When we suppose that enough of the nitrate has been added, we pour the fluid upon a filter, and to the filtrate, we may again add a few drops of the nitrate. If this produces a precipitate, we may add still more of the nitrate, and filter again, and so proceed until the filtrate no longer yields a precipitate.

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* The most reliable apparatus and reagents may be obtained of Luhme, of Berlin, who has established an agency at 343 Broadway, New York.

If an excess of the mercury solution has been added, it may readily be determined by removing a drop of the filtered fluid upon a watch glass, and adding a drop of a solution of carbonate of soda. If this produces a yellow precipitate, it indicates an excess of mercury; on the contrary, if the precipitate is white, the mercury solution has not been sufficient.

From the amount of oxide of mercury required to precipitate the urea, we can easily estimate the amount of urea present; for, as every equivalent of urea requires four of the oxide, we have the proportion, 432 (equiv. wt. of 4 HgO): 60 (equiv. wt. of urea) :: a (the am't of HgO required) : x (the am't of urea it will precipitate.) As it requires 7.2 grains of oxide of mercury to precipitate one of urea, we may readily estimate the urea by dividing the oxide of mercury required by 7.2.

A tube capable of containing one cubic inch of fluid and graduated to hundredths, answers very well for containing the mercury solution; however, it is not of much importance as to the amount it will contain. It is only necessary that it be graduated, so that by knowing the value of an entire measure, we may be enabled to estimate what part of a measure has been required.

The value of the mercury solution may be obtained in several ways. We may obtain it directly of a known value by dissolving red oxide of mercury (HgO) in dilute nitric acid. Say 100 grains of the oxide is taken, and we add to this just sufficient dilute nitric acid to dissolve it; we then add to this solution sufficient water to make it equal to five cubic inches; obviously, each cubic inch of this solution will contain twenty grains of the oxide of mercury.

We have found by repeated experiments, that the value of a solution of nitrate of mercury may be very easily, and with considerable accuracy, obtained by passing into a known volume of the solution, contained in a counterpoised test tube, a stream of sulphurous acid gas (SO_2) to complete saturation, and then heating the mixture. The metallic mercury will now be precipitated. The greater portion of the fluid can now be removed by means of a *pipette,* and the tube and its contents transferred to a water bath, and dried at a temperature of 130° F. It can now be weighed, and the increase of weight will indicate the amount of mercury in the volume of solution acted upon. From this we can estimate the amount of oxide it would form, by this proportion; 100 (equiv. wt. Hg): 108 (equiv. wt. HgO) :: a (the amount of Hg obtained) : x (the amount of oxide it would form.)

Liebig has given a method which is very easy of execution, depending upon the fact, that if to a solution of nitrate of mercury we add phosphate of soda, the oxide of mercury is precipitated as phosphate, and this precipitate is re-dissolved by a solution of chloride of sodium. If, therefore, we precipitate the oxide of mercury from its nitric acid solution by phosphate of soda, and add to the precipitate a solution of chloride of sodium of known strength, to dissolve the precipitate, we can easily estimate the amount of oxide of mercury present; for every equivalent of the chloride of sodium will represent one of the oxide. From this, we have the proportion; 59 (the equiv. wt. of NaCl.) : 108 (the equiv. wt. of HgO) :: a : x (the am't of HgO present.)

The solution of chloride of sodium is easily obtained of a known strength, when we remember that a saturated solution at the temperature of 60° F. always contains 27 per cent. of the salt. Unfortunately, it is somewhat difficult to procure perfectly pure chloride of sodium.

Lastly, we may ascertain the value of the mercury solution by precipitating a known volume by means of a solution of pure urea of known value.

In order to make this subject more easily understood, we propose to exemplify it by introducing, at each step, the results of an actual investigation.

In this case, 100 grains of prepared urine required .75 of a measure of a solution of nitrate of mercury, containing 19.872 grains to the measure, to precipitate the urea. This .75 of a measure contained 14.904 grains of oxide of mercury. Therefore, we have this proportion: 432 : 60 :: 14.904 : 2.07 (the am't of urea in 100 grains,) which would give 20.7 grains to the 1000 grains of urine.

Determination of the uric acid. ($C_{10}O_4H_6N_4$.) The uric acid may be estimated by evaporating 2000 grains of the urine to about one-half its bulk, then adding to this about half a drachm of hydrochloric acid and allowing it to stand 36 or 48 hours, when the uric acid will be deposited in crystals upon the sides and bottom of the dish. The fluid can now be decanted, and the crystals washed with a little alcohol, and then transferred to a weighed filter and again washed with more alcohol. They may now be dried in a water bath and weighed. The weight divided by 2 will give the amount in a thousand grains. Our example gave .97 of a grain in the 1000 grains of urine.

Determination of the mucus. The mucus may easily be determined by passing a known amount of the urine through a weighed filter, by which it will be retained. The filter is now washed with water, acidulated with hydrochloric acid, dried upon a water bath, and weighed. The increase in weight will represent the weight of the mucus. Our case gave .12 of a grain.

We have now obtained the *organic* matter of healthy urine, with the exception of those substances usually denominated extractives, and which are obtained by an indirect method.

Determination of the water and solids. Place in a counterpoised Berlin evaporating dish 1000 grains of urine. Evaporate this in a water bath at about 180° F. until it ceases to lose in weight, (weighing at intervals of about half an hour.) When the dish ceases to lose in weight, its weight may be accurately noted. The loss in weight will indicate the *water*, and the residue the amount of *solid matter* in 1000 grains of urine. Our example gave, *water*, 947.5 grains, *solids*, 52.5 grains.

A very convenient water bath that we have used for this purpose is a tin vessel holding about a quart of water, upon which the evaporating dish containing the urine is to be floated, at the same time immersing in the water a thermometer. By now placing under the vessel a strong flame of a spirit lamp, we can quickly raise it to the desired temperature: now replacing this lamp by one with a feeble flame, we can maintain a very uniform temperature for several hours. It requires about seven hours to evaporate 1000 grains of urine at 180° F.

Determination of the fixed salts. The evaporating dish containing the solid constituents of the 1000 grains is now to be strongly heated for the purpose of carbonizing the mass. It is best to thus destroy as much of the organic matter as possible. If this precaution is not taken, but the solids transferred directly to a platinum crucible, as is generally recommended, it will very much injure, if not entirely destroy the crucible. After the solids have been well carbonized, they may be carefully removed from the evaporating dish to a counterpoised platinum crucible, there to be kept at a red heat until the carbonaceous matter is entirely driven off; that is, until the mass becomes perfectly white. The increased weight of the crucible will give the gross weight of the fixed earthy and alkaline salts. The case before us gave 19.30 grains.

Determination of the earthy and alkaline salts. The fixed salts are now to be digested with two or three ounces of hot distilled water, then thrown upon a filter and washed with a little more hot water, and this process continued as long as anything is dissolved. These washings are to be collected with the previously filtered fluid and retained for further examination. We will now have upon the filter the earthy salts, consisting of the phosphates of lime and magnesia, and the silica. The filter is now to be transferred with its contents to a counterpoised platinum crucible and powerfully heated, and the increase of weight noted. This increase will indicate the gross weight of these salts. Our case gave 2.15 grains. This, taken from the gross weight of the fixed salts, will give the gross weight of the fixed alkaline salts. Thus 19.30– 2.15=17.15, *the alkaline salts.*

The earthy salts may now be treated with dilute nitric acid, which will dissolve the phosphates and leave the silica as a gritty mass consisting of shining crystals. These are to be carefully washed upon a counterpoised watch glass, and then dried and weighed. The increase in weight will give the *silica.* Our case gave .03 of a grain. The nitric acid solution of the phosphates may now be rejected.

Determination of the Chlorine in the alkaline salts. The aqueous solution of the fixed alkaline salts, obtained above, is now to be acidified with nitric acid, for the purpose of preventing the precipitation of the phosphoric acid; and then a solution of nitrate of silver is added as long as it produces a precipitate. The chlorine will now be thrown down as chloride of silver (AgCl.) The fluid is now boiled for a few minutes, and then thrown upon a counterpoised filter, which is then dried and weighed. Or perhaps it is better to transfer the chloride to a porcelain crucible, and heat it to incipient fusion, and then weigh. In case the chloride of silver adheres to the crucible it may easily be detached by digesting in it zinc and dilute sulphuric acid. From the weight of the chloride of silver obtained, the amount of *chlorine* can be calculated as follows: 144 (the equiv. wt. of AgCl.):36 (the equiv. wt. of Cl.):: $a : x$. Thus in the examination we made, the proposition is as follows:

144: 36:: 30.52: 7.63 (Chlorine.) The solution of alkaline salts need not be retained.

The sulphuric acid might be obtained from the above acid solution of the fixed alkaline salts, by precipitating the excess of nitrate of silver by chloride of sodium or chloride of ammonium. If chloride of sodium be used, it should previously be examined for sulphate of soda, as that is a very frequent impurity. After filtering we can precipitate the sulphuric acid by means of chloride of barium, which will throw it down as sulphate of baryta. From this we can estimate the sulphuric acid as follows: 117: 40:: $a : x$. It is best, however, to estimate the sulphuric acid from a fresh portion of urine, as the sulphates, when incinerated with much organic matter, are liable to be reduced to sulphurets. In several cases which we have examined, the fixed salts after incineration, evolved sulphuretted hydrogen when treated with dilute sulphuric acid, which evolution indicated the presence of a sulphuret.

Or the potassium might be estimated from the above solution of the fixed alkaline salts by neutralizing it with ammonia, and precipitating the phosphoric and sulphuric acids, and the excess of nitrate of silver by chloride of barium. The reaction would be as follows: $2NaO{:}HO,PO_5+KO.SO_3+AgO.NO_5+4BaCl=2NaCl+KCl+AgCl+2BaO{:}HO.PO_5+BaO.SO_3+BaO.No_5$.

After filtration the excess of barium should be removed by adding a solution of carbonate of ammonia. Thus, $BaO.NO_5+BaCl+2NH_4O.CO_2=2BaO.CO_2+NH_4O.NO_5+NH_4Cl$. We again filter, evaporate to dryness, and heat to redness; we thus volatilize the ammonia salts and have left a residue of the chlorides of potassium and sodium. By dissolving these in water we can then precipitate the chloride of potassium by the bi-chloride of platinum. It is best, however, to obtain the potassium from 100 grains of urine.

Determination of the chloride of ammonium Take 100 grains of filtered urine and acidify with nitric acid, then add a solution of nitrate of silver as long as it produces a precipitate; and proceed as in estimating the chlorine of the fixed alkaline salts. The excess of the chlorine thus obtained over that of the fixed alkaline salts is to be given to ammonium; as the chloride of that base volatilizes during the ignition of the alkaline salts. Thus in the case before us, 100 grains of fresh urine yielded 3.47 grains of chloride of silver, which would give, for 1000 grains of urine, 34.70 grains, being an excess of 4.18 grains over the chloride furnished by the fixed alkaline salts;

for, 34.70 – 30.52 = 4.18. This would represent 1.045 grains of chlorine; for, 144: 36:: 4.18: 1.045. This would form 1.567 grains of chloride of ammonium; for, 36: 54:: 1.045: 1.567.

Determination of the phosphoric acid. *Lehmann* has given a very easy method of determining the phosphoric acid. A solution of sesquichloride of iron of determined strength is added to a known amount of urine, acidified with acetic acid, so long as the phosphate of the sequioxide of iron (Fe_2O_3,PO_5) is precipitated. From the amount of iron solution thus used, the amount of phosphoric acid is calculated.

The method we have followed in preparing this test solution of iron is as follows: Dissolve ten grains of pure iron in *aqua regia.* Evaporate to dryness in a water bath. This is for the purpose of getting rid of the excess of acid without decomposing the chloride of iron. The residue is now dissolved in a few ounces of water. If it does not all dissolve it indicates that part of the chloride was decomposed during evaporation. This may be dissolved by adding a few drops of hydrochloric acid. Enough water is now added to make the solution measure ten cubic inches. Obviously, each cubic inch of the solution will contain one grain of iron. As it requires two equivalents of iron to precipitate one of phosphoric acid, we make the first term of our proportion 56, which is the combining weight of two equivalents of iron, and the second 72, which is the equivalent weight of phosphoric acid.

The analysis before us required, of a solution prepared as above, 1.25 measures to precipitate the phosphoric acid in 1000 grains of urine. This would indicate 1.25 grains of iron. We now have the proportion, 56: 72:: 1.25: 1.607. Therefore the 1000 grains contained 1.607 grains of phosphoric acid.

In order to ascertain if an excess of the iron solution has been added, a strip of paper, saturated with a solution of ferrocyanide of potassium, is moistened with a drop of filtered urine; if there is a trace of excess, it will be indicated by the formation of Prussian Blue.

Determination of the Lime. The urine from which we obtained the phosphoric acid is now neutralized with ammonia, free from carbonate, a slight excess being added. This will precipitate the excess of sesqui-chloride of iron, if any has been added, as sesquioxide. The urine is now filtered and the filter well washed. In precipitating the phosphoric acid by the chloride of iron, the bases with which it was combined were changed into chlorides, thus:

$2\ CaO{:}HO.PO_5+Fe_2Cl_3=Fe_2O_3,PO_5+HCl+2\ CaCl$. We have, therefore, the calcium in the form of chloride, in an alkaline solution. We now add from a graduated tube a solution of oxalic acid, ($C_2O_3.HO$) of known strength, as long as it produces a precipitate. From the amount required, we calculate the lime as follows: 45 (the atomic wt. of $C_2O_3.HO$) :28 (atomic wt. of CaO) $:: a : x$. Or 45: 28:: 1: .622, which was the amount required for the specimen before us.

The oxalic acid is prepared as has been already recommended in a former number of this Journal. (Vol. vi. No. vi.)

Determination of the Sulphuric acid. The above urine is again filtered and slightly acidified with nitric acid, and a solution of chloride of barium is added as long as it produces a precipitate. This will throw down the sulphuric acid as sulphate of baryta. This is thrown upon a filter, washed, dried, and carefully removed from the filter to a platinum crucible, ignited and weighed. From the sulphate thus obtained, the sulphuric acid is calculated. The atomic weight of sulphate of baryta is 117, that of sulphuric acid is 40. The analysis from which we have been quoting gave 4.70 grains of the sulphate. Therefore, 117: 40:: 4.70: 1.606.

It is always recommended in estimating sulphuric acid to ignite the sulphate of baryta *with* the filter, but this will give erroneous results. The carbon of the filter reduces the sulphate to a sulphuret, ($BaO, SO_3+4C=4CO+BaS$) the atomic weight of which is 85, while that of the sulphate is 117, a difference which would effect our calculations very seriously. We have made repeated experiments upon this point, and *in every instance,* upon the addition of dilute nitric acid to the incinerated mass, there was an evolution of sulphuretted hydrogen, thereby showing that a reduction had taken place. Sometimes this reduction was but partial, and in other cases it was nearly total. To give but one example: Five grains of well dried sulphate of baryta were moistened with water and carefully spread upon a filter of moderate size, and ignited. After incineration it weighed but 3.87 grains, showing that nearly all the sulphate had been reduced.

As this reduction of the sulphate of baryta takes place from the presence of the carbonaceous matter of the filter, it is not improbable that a similar reduction takes place during the incineration of the solid residue of the urine (which contains a large amount of carbonaceous matter,) for the purpose of estimating the fixed inorganic salts.

In this case, however, there is present a large amount of nitrogen, which will combine with the hydrogen present, to form ammonia; this will eliminate oxygen, which will in a great measure supply the carbon. This reduction, however, does sometimes take place. We have treated the incinerated residue of several portions of urine with dilute sulphuric acid, and in two instances had sulphuretted hydrogen evolved, showing that a sulphuret was present.

According to the method of analysis proposed, if a reduction took place it would be discovered in summing up the result of the process. It would be found that we had not sufficient base to supply the chlorine; if so, we should assume sufficient sodium for that purpose; we should thus meet any reduction that might have taken place.

If, on the other hand, we had estimated the sulphuric acid from the incinerated inorganic salts, and a reduction had taken place, our estimate of that acid and its salts would be too low, and we should not have sufficient chlorine to form chloride of sodium enough to make the alkaline salts correspond, by calculation, to the gross weight of those salts as obtained by incineration. For this reason we think it better to estimate the sulphuric acid as recommended above.

Determination of the Potassium. Take 100 grains of urine, supersaturate with caustic ammonia, which will precipitate the earthy phosphates, and then add chloride of barium as long as it produces a precipitate. By this process we precipitate the sulphuric and phosphoric acids from their combination with the alkaline bases. At the same time it will change these bases into chlorides, thus: $2\,NaO{:}HO.PO_5+KO.SO_3+3\ BaCl=2\ BaO{:}HO.PO_5+BaO.SO_3+2\ NaCl+KCl$. The first two salts are insoluble, the chlorides are soluble and may be separated by filtration. The filtered fluid, however, will contain the excess of chloride of barium added. This may be removed by digesting it with carbonate of ammonia and a little free ammonia. We thus change the chloride of barium into carbonate of baryta, and at the same time form the chloride of ammonia, thus: $BaCl+NH_4O,CO_2=BaO.CO_2+NH_4Cl$. The first of these salts is to be removed by filtration. The filtered fluid is then evaporated to dryness, and incinerated, for the purpose of volatilizing the ammoniacal salt. The residue, consisting of the chlorides of sodium and potassium may now be weighed. It is then dissolved in a small quantity of water and a solution of bi-chloride of platinum ($Pt\ Cl_2$) added as long as any precipitate is produced. The mixture is now evaporated upon a water bath to dryness, or nearly so. We now treat the dry residue with a small portion of alcohol containing a little ether. This will dissolve the chloride of sodium together with the excess of bichloride of platinum added. By throwing the mixture upon a weighed filter these can be separated. The filter, with its contents, consisting of the double chlorides of potassium and platinum ($KCl, PtCl_2$) dried upon a water bath at a temperature of 212° and weighed. Its increase in weight will indicate the amount of double salt obtained from 100 grains of urine, and this multiplied by 10 will give the amount to be obtained from 1000 grains.

From the amount of double salt obtained, we calculate the amount of chloride of potassium that it contains. The atomic weight of the double salt is 245, that of the chloride of potassium is 75, therefore, $245 : 75 :: a : x$. To illustrate with our example:—100 grains of urine furnished 1.885 grains of the double chloride of potassium and platinum. This would indicate 18.85 grains in 1000 grains of urine. Therefore, 245: 75:: 18.85: 5.770, (the amount of chloride of potassium present in 1000 grains of urine.)

The amount of chloride of potassium thus obtained may be taken from the gross weight of the chlorides of sodium and potassium, and the difference will represent the chloride of sodium. This may be used as a confirmatory test; the weighing, however, is not essential, as we obtain the chloride of sodium in another manner.

Distribution of inorganic substances. By now summing up the facts which have been obtained concerning several of the bases and acids of the inorganic salts, we can make out the manner in which they were combined, together with the amount of salts they would produce. We can also calculate the amount of those bases and acids which have not been directly estimated.

First. We have the gross weight of the *earthy salts.* Of the special constituents of these, we have estimated the *lime* and *silica.* We have also estimated the gross weight of the *phosphoric acid* contained in the alkaline and earthy salts. Having these four facts, we can, by simple calculation, determine the individual quantities of the earthy salts. We first determine how much phosphoric acid the lime present will require, and by adding these together, it will give us the *phosphate of lime.* By now adding the weight of the *silica* to the weight of the phosphate of lime, and deducting this from the gross weight of the earthy salts, we obtain the amount of *phosphate* of *magnesia.* From the weight of the phosphate of magnesia we can calculate the amount of phosphoric acid necessary to form that salt. By adding this to the weight of the phosphoric acid in combination with the lime, and deducting it from the gross weight of the phosphoric acid obtained from all the inorganic salts, we can estimate the quantity in combination with the alkaline bases.

In estimating the phosphates, it must be remembered that they existed in the urine in the tribasic form, and, as by incineration, they were reduced to the bibasic form, we must, in our calculations, make an allowance for this reduction.

Secondly. Of the fixed *alkaline salts;* we have the amount of the *phosphoric* and *sulphuric* acids; also, the amount of *chlorine* and *chloride of potassium* that the *potassium* present would form. Having these four facts we can estimate the individual quantities of the fixed alkaline salts.

In distributing these, we first ascertain how much soda the phosphoric acid would neutralize; these added will represent the amount of bibasic phosphate of soda, ($2\,NaO{:}\,PO_5$). It must be remembered, however, that it existed in the urine as the tribasic phosphate, ($2\,NaO{:}HO.PO_5$).

We may now ascertain how much potash the sulphuric acid obtained would neutralize, and then ascertain how much chloride of potassium would be required to furnish this amount of potash; we then take this amount of chloride from the entire amount of chloride of potassium obtained from the urine, and leave the remainder as *chloride of potassium.* By now adding the potash required, and the sulphuric acid requiring it, together, we shall have the amount of *sulphate of potash.*

If the chloride of potassium furnished by the entire amount of urine will not furnish sufficient potash for all the sulphuric acid, we shall have to ascertain how much sulphuric acid would be required to neutralize the potash represented by the chloride of potassium, and give it that amount. The excess of sulphuric acid should then be given to soda, as sulphate of soda.

If, on the other hand, the chloride of potassium is more than sufficient to furnish the sulphuric acid with base, we leave the excess of chloride as chloride of potassium, as above stated, and we now ascertain how much chlorine is in combination with this potassium, and deduct it from the entire amount of chlorine; the residue should then be distributed to sodium, and estimated as *chloride of sodium.*

We may, however, estimate the chloride of sodium by another method. As we have already determined the phosphate of soda, the sulphate of potash, and the chloride of potassium, or sulphate of soda, as the case may be, we may ascertain the amount of chloride of sodium, providing no reduction has taken place, by adding these together and deducting their gross weight from the entire weight of the fixed alkaline salts. It is better, however, to take the chlorine remaining after saturating the potassium and ascertain how much chloride of sodium it would form, and add this to the sum of the other salts. If now the entire weight exceed the gross weight of the salts, as obtained after incineration, we may fairly conclude that a reduction has taken place, or that some base has been lost during the manipulation. On the other hand, if it fall short, it will indicate some error in the analysis. These then may be used as confirmatory tests of the accuracy of our operations.

It is scarcely necessary to state that if the sulphuric acid is just sufficient to neutralize the potash, the entire amount of chlorine should be given to the sodium.

Extractives. Having now estimated the various inorganic salts, together with the urea, the uric acid and the mucus, we may add them together and take their gross weight from the entire weight of the solids found in the urine. The difference will indicate those substances usually put down as *extractives.* It is probable, however, that a part of the weight of these extractives is due to water which was not driven off by the heat (180°) to which the urine was subjected in estimating the solids; for we know that some of the salts found in the urine, when in their crystaline state, will retain several equivalents of water unless exposed to a much greater temperature than this: For example, the phosphate of magnesia, when in its crystaline form, $2MgO:HO.PO_5+14Aq.$ requires a heat of 347° F. to drive off all its water of crystalization. But, owing to the readiness with which many of the organic matters are decomposed it is unsafe in estimating them to apply a heat much above 180°.

As the manner of distributing the inorganic substances may be better understood by an example, we will give the method of their distribution in the analysis referred to, the results of which we have already given.

Earthy Salts. The entire weight of the earthy salts was 2.15 grains. Of this, .622 of a grain was *lime* and .03 of a grain *silica.* This amount of lime would require .799 of a grain of phosphoric acid. For, 56 (the at. wt. of 2. equiv. lime) :72 (the at. wt. of phosph. acid) ::.622 :.799. It would therefore form 1.421 grains of bibasic phosphate of lime, ($2CaO:PO_5$) the at. wt. of which is 128. But it existed in the urine as the tribasic phosphate ($2CaO:HO.PO_5$) the at. wt. of which is 137. Therefore 128:137::1.421:1.520 grains of tribasic phosphate of lime.

By now adding the weight of the silica to that of the bibasic phosphate of lime and taking this from the gross weight of the earthy salts, we can estimate the amount of *bibasic phosphate of magnesia* ($2MgO:PO_5$.) Thus 1.421+.03=1.451. Then 2.15—1.451=.699 of a grain, the amount of bibasic phosphate of magnesia. This bibasic phosphate, the atomic weight of which is 112, really existed in the urine as the tribasic phosphate ($2MgO:HO.PO_5$) whose atomic weight is 121. Therefore 112:121::.699:.755 of a grain of tribasic phosphate of magnesia.

We have now to inquire how much phosphoric acid the .699 of a grain of $2MgO:PO_5$ contained. We ascertain this by the following proportion, 112. (at. wt. of $2MgO:PO_5$) :72 (at. wt. of PO_5) ::.699 :.449 of a grain of PO_5. We have already seen that the *lime* required .799 of a grain; therefore, .449+.799=1.248, the number of grains of PO_5 in combination with the earthy bases. The entire amount of phosphoric acid in the urine we have already ascertained to be 1.607 grains. Therefore, 1.607—1.248=.359 of a grain of phosphoric acid in combination with the *alkaline bases.*

Alkaline Salts The .359 of a grain of phosphoric acid left after supplying the earthy bases, we distribute to soda, as that is the base with which it was in combination, forming the bibasic phosphate ($2NaO:PO_5$) the atomic weight of which is 134. Therefore, 72: 134::.369:.688, the number of grains of bibasic phosphate. But it existed in the urine as the tribasic phosphate ($2NaO:HO.PO_5$) whose atomic weight is 143. Therefore 134:143::.668:.712, the amount of tribasic phosphate of soda.

Sulphuric acid. We now distribute the sulphuric acid. The analysis gave 1.606 grains, which will require 1.927 grains of potash, for, 40. (the at. wt. of SO_3) :48 (the at. wt. of KO.) ::1.606 (the entire amount of SO_3) :1.927, (the amount of KO required.) We have now to inquire how much chloride of potassium is required to represent 1.927 grains of potash. This may be ascertained by the proportion 48, the at. wt. of KO: 75, the at. wt. of KCl.:: 1.927.:3.011, the amount of chloride of potassium necessary to represent 1.927 grains of potash. We have already determined by the analysis that there was present in the urine, sufficient potassium to represent 5.770 grains of chloride of potassium (KCl.) There is, therefore, more potassium present than is required to neutralize the sulphuric acid, and we may from that conclude that all the sulphuric acid was in combination with potash, forming sulphate of potash. To obtain the weight of this last salt we must add together the sulphuric acid and the potash required; thus, 1.606+1.927=3.533, the amount of sulphate of potash.

We may now deduct the 3.011 grains of KCl which originally existed as potash, from the 5.780 grains of KCl, and the difference, 2.759 grains, indicates the amount of KCl in the urine.

The fixed alkaline salts yielded 7.63 grains of chlorine; we have, however, seen that a certain amount of chlorine was in combination with potassium, forming 2.759 grains of KCl, which would require 1.324 grains of chlorine, for 75 :36 ::2.759 :1.324. This, deducted from the 7.63 grains of chlorine, leaves 6.306 grains, which must now be furnished with as much sodium as it will neutralize, and be estimated as chloride of sodium.

The 6.306 grains of chlorine would require 4.028 grains of sodium and form 10.334 grains of chloride of sodium.

For, 36, (the at. wt. of chlorine) :23, (the at. wt. of sodium) ::6.306:4.028. Therefore, 6.306+4.028=10.334 the amount of *chloride of sodium.*

We may now compare the sum of the weights of the several fixed alkaline salts, with their gross weight as determined after incineration, and observe how they correspond.

Their weights determined separately, were as follows:

Phosphate of soda, (bibasic)	.668	grains.
Sulphate of potash	3.533	“
Chloride of potassium	2,759	“
Chloride of sodium	10.334	“
Total	17.294	“
Their gross weight as determined from the incinerated residue was	17.150	“
Difference	.144	“

On comparing these results we find a difference of but little more than one-tenth of a grain. In case a reduction had taken place, or any loss had occurred during the first part of the manipulation, this is the direction in which we should look for a discrepancy. When, however, our results coincide as closely as this, we may be well satisfied.

In making out the results of our analysis, we include with the alkaline salts, the chloride of ammonium, which has been made out by a separate analysis. We must also remember that the bibasic phosphate of soda existed in the urine in the tribasic form.

By now adding together the different constituents, both organic and inorganic, which have been estimated, and deducting their weight from the entire weight of the solids, we obtain the weight of the extractives. The analysis gave as solids, 52.5 grains. The different constituents which were estimated separately, amounted to 43.00 grains. Therefore, 52.5—43.00=9.50 grains of *extractive matter.*

The specimen of urine, from whose analysis the various results above mentioned were derived, also contained *oxalate of lime.* As this salt is an abnormal ingredient, it was carefully removed before subjecting the urine to analysis, and we have thus far in our consideration, omitted to speak of it.

The presence of this salt is most readily detected by the microscope, and it may be quantitatively estimated by the method already given in the number of this Journal before referred to.

A specimen of 1000 grains of urine, furnished by the same person, analyzed a few days after the above, yielded .075 grains of the oxalate; and several examinations, made at different times, have resultin the detection of about the same amount. The person from whom these specimens have been obtained has been conscious of passing this salt, in various crystalline forms, for about two years. The urine was carefully examined for *lactic acid,* but not a trace was discovered.

We may now reduce the results of the analysis to a tabular form, and in so doing, we will include the oxalate of lime, which will cause the results to differ somewhat from those already given. The amount of urine voided during twenty-four hours, was 27 fluid ounces. Its specific gravity at 60° F. was 1024. The reaction acid. The results of this analysis we indicate by A. The results characterized by B are those from an examination of the urine of a woman ninety-five years of age. The total amount for twenty-four hours was not noted. The specimen examined, however, was taken from an entire day's voiding. It had a strong acid reaction, and a specific gravity of 1021.

	A.		B.	
Water,	947.425	947.425	952.100	952.100
Solids,	52.575		47.900	
Urea,	20.700		17.040	
Uric Acid,	.970		.780	
Mucus,	.120		.620	
Extractives,	9.500		14.886	
Organic Matter,		31.290		33.326
Phosphate of Soda,	.712		1.604	
Sulphate of Potash,	3.533		.739	
Chloride of Potassium,	2.759		4.438	
Chloride of Sodium,	10.334		4.802	
Chloride of Ammonium	1.567		1.621	
Alkaline Salts,		18.905		13.204
Phosphate of Lime,	1.520		.988	
Phosphate of Magnesia,	.755		.362	
Oxalate of Lime,	.075		.000	
Silica,	.030		.020	
Earthy Salts,		2.380		1.370
		1000.		1000.

ART. II.—*Observations on Phthisis Palmonalis.* By C. CHAPMAN, M. D., Winchester, Missouri.

Pulmonary Consumption is a subject that has for centuries engaged the minds of the most learned of the medical profession, and even now it is looked upon with but little hope of cure. But the old proverb tells us, that in a multitude of counselors there is safety. Knowing such to be the case, I will briefly give my views concerning the Pathology, treatment, &c., of Phthisis Pulmonalis, hoping at the same time that it may call forth reflections and farther investigations upon this very obscure disease.

The lungs, we know, perform a very important office in the human body; being constructed so as to expose the greatest possible surface to the influence of atmospheric air; there being no less than two hundred millions of air cells in the human lungs, and those cells so situated as to absorb oxygen through their walls on every side; this coming in contact with the venous blood flowing through their innumerable capillaries, changes it from venous to arterial, by giving out the products of the worn down tissues of the body, and receiving oxygen in return. Thus it is through the lungs that the blood is purified, and much of the worn down tissues of the body are disposed of.

But we must not fail to keep before our minds this important fact, viz: That pure blood is necessary to the healthy action of every organ in the human economy.

Now we know that the blood carries with it materials for building every part of the body. If, therefore, the materials are deranged, the parts they supply must inevitably suffer, and if still supplied with the same unhealthy matter, they will finally perish. And further: The smaller the amount of pure blood sent to a part the smaller will be the portion of building material sent there, and slower will be the growth of that part, and vice versa. We have a striking illustration of this in the fœtal circulation.

But to come nearer the subject before us. *I affirm that as long as a sufficient quantity of pure blood flows through a part, that part cannot die.*

We all know that the right arm of a blacksmith is larger and stronger than his left. Why is this? Because by its constant action its tissues are stimulated, causing a greater amount of blood to flow through the parts; consequently they receive a greater amount of building material. *Ubi stimulus ibi fluxus.* We know also that atrophy will arise from deficient circulation.

But let us go further. Cut off the greater portion of the circulation, by tying a cord around your arm, for instance, and what will be the result? We find that disease soon takes place, and if the obstruction is not removed, the limb will perish. But let us cut the circulation entirely off, and what will follow? Death of the part will be the result, and nature, if let alone, will cast it off as a foreign body.

Let us now ask what is the condition of a diseased lung, and what its symptoms? We know that the whole lung structure is not primarily affected. The upper lobes suffer first, and the upper portion of these lobes. Tubercles are there deposited in the mucus membrane of the air cells, carried thither by the blood. These deposits gradually increase in size—the partitition walls between two or more of them give way—they coalesce, and softening ensues. The many thousand capillaries that once acted normally, now refuse to carry blood to the legions of air-cells that are there to receive it. Thus the current of life is checked, the material for supplying that portion of the lung is cut off; the air-cells shrivel and die; they no longer belong to that living organ, but become foreign bodies, and are by an effort of nature thrown off; at the same time the blood that was there being carried to exchange its carbonic acid for oxygen is compelled to return with its load of carbon and worn down tissues of the body. Thus we see the circulation cut off little by little; we see also the lungs die in the same ratio, and as they perish, nature tries to rid herself of the dead matter, until finally the lungs no longer receive sufficient blood to sustain life.

In the later stages of Phthisis we find enlargement of the right and left auricles of the heart; also anasarca of the feet and ancles. Why is this? The venous blood that was being carried from the right side of the heart, through the pulmonary arteries into the lungs, finding the greater portion of the pulmonary capillaries impervious, is compelled suddenly to return. Hence we have increased muscular contraction of the right ventricle, and a yielding of its walls to the pressure of contained blood. We also know that there is no surer cause of anasarea than a dilatation of the right cavities of the heart. We find emaciation to be a very prominent symptom in this disease; also coldness of the extremities. The whole body is easily afflicted with cold. Let us now see if we can account for these things.

We know that the adipose tissue of the body constitutes the great store-house of caloric. It is from this store-house of fatty matter alone that animal heat is produced. We know also that in Phthisis the healthy functions of the body are so much deranged that nature fails to lay up a sufficient store of this tissue to supply her wants; and the fatty matter being consumed faster than it is stored away, emaciation must inevitably follow.

In the third stage of this disease we see emaciation progress even more rapidly, from this well known fact, viz: In proportion as the disease advances, in the same ratio will secretion and assimilation be impeded.

We see also the exsanguined appearance of the surface; the sunken eye, with its pearly white sclerotic; doubtless denoting the anæmic condition of the circulating fluid; for we find the blood containing (among other abnormal properties) an undue amount of fibrin, and a deficient amount of red globules.

It is, I believe, an established fact, that as the fibrin increases, in the same ratio will the red globules diminish, and vice versa.

Let us for a moment view some of the indications of treatment in this disease.

I believe the most popular medicine in the eyes of the profession is cod liver oil. What is its modus operandi? Some, we know, attribute the good effects arising from its use to the small quantity of iodine it contains. As for myself, I think that the iodine adds but little to its healing properties, and did I think it here necessary, would give my reasons. Let me now ask what motive we have in view in administering this oil. Do we give it because we found it did good in cases of the same kind before, or do we have some particular object in view in administering it? As I before remarked, we find emaciation, cold extremities, and indeed a general degree of chilliness pervading the whole body, constant symptoms in this disease, and the farther it advances the more prominent will be these symptoms.

The object, therefore, in giving this oil is to supply the system with adipose matter, which is essential to life; for we see from the emaciation and other symptoms that the fatty tissue of the body is almost consumed, and if not supplied the system will perish for want of caloric.

How often do we witness the good effects arising from the use of this oil in Phthisis. We see our patient gain in flesh and in strength. He feels a natural glow of heat pervade his whole body. His color is changed, &c.

Is it the iodine that produces this change, or is it the oil alone? Now, in order to build up the body, or any organ of the body, what must be done? *Must we not try and excite a healthy flow of blood through the parts?* We know that the blood carries materials for building every part of the body, and if it is not carried in sufficient quantity to answer the demands of a part, that part will finally die. I will now repeat, that as long as a sufficient quantity of pure blood flows through a part, that part will not die. Now, can we repair a diseased organ where the circulation is in a manner checked, and where the parts are slowly dying, unless we direct a constant flow of pure blood through that organ? I answer, never. Let us now for a moment view a diseased lung. We see it gradually die, little by little, until the whole lung has finally perished. *Why does it die?* Does a sufficient supply of pure blood circulate through its structure up to the time of death, or is the circulation cut off before it dies? I again repeat that the lung structure *cannot* die as long as it receives a sufficient quantity of pure blood.

In the treatment of Phthisis, we find that cod liver oil stands at the head. The fatty matter it contains supplies the system with fuel—which is already deficient in the body—by this means the circulation is aroused, and at the same time a general glow of warmth pervades the whole system; a greater amount of blood is sent to every part, consequently a greater amount of building material. I have for a long time believed that the circulation of the blood was too much neglected in the treatment of this disease. In order to preserve the life of a part, we must cause pure blood to circulate through that part. I see that alcohol is spoken of as a prophylactic against tubercles, and believe it to be a preventive. I do not remember at this time of knowing or hearing of an individual dying with Consumption who has during his life been in the habit of using temperately alcoholic stimulants.

How often is it the case that we see one member of a family alone surviving, when all the rest have been carried to an untimely grave by Phthisis; and by making inquiry we learn that this individual has nearly all his life been in the habit of using alcohol moderately. Why has not Consumption carried him away also? I answer, that through stimulation the blood is made to circulate through the different parts of the system, and as long as it is kept in healthy action, neither the lungs nor any other part of the body can perish.

Now I do not wish to be understood as upholding the use of alcoholic spirits as a beverage, for such is not the case. I am bitterly opposed to its abuse, but used *properly*, as a medicine, it is invaluable.

If my views regarding the use of cod liver oil are correct, why will not any other oil answer the same purpose.*

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*The reader is referred on this point to one of the lectures of Dr. Thompson on Consumption, among the selected articles in the March No. of the Journal. His experiments affirm the good to be derived from animal oils, especially neat's foot oil, but negative any such expectation from the use of vegetable oils in Phthisis, with the exception, perhaps, of cocoa nut oil.—[Asst. Ed.

I believe also that if the stomach is too weak to retain it, the same effect may be produced by external application; for by this means it will be taken up by absorption, and converted to the wants of the system in the same way.

I also regard counter-irritation an important step in the treatment of this disease; also, due regard to exercise, regimen, &c.; and if the blood is lacking in any important principle, supply the lack. But above all watch with an eagle eye the state of the circulating fluid, always keeping in mind this important fact, viz: That as long as a sufficient quantity of blood flows through a part, that part will not die.

Hoping shortly to see something more able upon this very important subject, these scattered views are respectfully submitted.

ART. III.—*Period of Gestation.*

DR. DAWSON:—From the earliest history of medicine down to the present time, the question has been mooted: How long after conception is it to the birth of the full grown infant?

Writers, equally noted for their medical attainments and skill, have been found advocating opposite opinions upon this subject.

Ryan gives a list of notables, pro and con, in the celebrated Gardiner-Peerage case. And the opinions of these men are referred to by almost all the obstetric writers since that day, to substantiate their own.

Without expecting to decide this question (for who shall decide when doctors disagree?) in regard to the duration of utero-gestation, I will bring forward an instance, where the impregnated woman herself had no such latitudinarian views as are ascribed to many writers on Midwifery. As the sequel will show, she was a *literal constructionist.*

In the summer of 1850 I was requested to visit Mrs. ——, who, it was said, "was expecting to be confined."

Having no acquaintance with the family, I inquired of the messenger, whom I supposed to be the lady's husband, where they lived; and as he did not expect to go directly home, I set out for the house forthwith.

On entering the house and paying the customary compliments—as a further introduction I began to talk about "matters and things in general"—and then to make casual inquiries respecting herself. Finding her at work as I entered the house, of course I was somewhat surprised; but supposing there was a little house-work to be done in the emergency, and that it was such as she was unwilling to impose on any one else—no other female being present at the time—the supposed *necessity* of the case was sufficient to account for the present posture of affairs.

Among other inquiries, some like the following were asked, and the subjoined are substantially her answers:

How did you rest last night? Very well, better than usual. I remarked that it was commonly said, "a calm generally precedes a storm." How did you relish your breakfast? Very much, my appetite is excellent. Have you any headache this morning? Not at all, I am never troubled that way. Have you anything like labor-pains? No sir, I feel like a lark.

Thinking it probable she had misapprehended my last question, I proceeded to particularize—endeavoring to elucidate my inquiry about "labor-pains." Satisfied that she comprehended my meaning, and that "coming events were casting their shadows *before*" in her case, and though she did not need a physician then she would soon I not only saw *no reason* why I should be sent for, but seriously began to mistrust that I had "got into the wrong box." To extricate myself from this difficulty, and solve the problem, was now the height of my ambition. How to do it, though a Yankee, was something of a puzzle. After a little reflection, said I: Did your husband come after me this morning? I suppose so, said she, I told him to. Here was a fix—sent for to accouch a woman who had no head-ache—relished her breakfast—had no labor-pains, and felt "like a lark."

Few physicians, I presume, are sent for to perform obstetric services under such circumstances. The *reason* that prompted her to send for me was not yet apparent to my mind, and I did not wish to ask for it directly.

While in "a brown study" how to get along without a seeming censure, it occurred to me to ask if "her time was up." Were you expecting to be confined before long? was my inquiry touching this point. With a promptitude that amounted to "a dead certainty" she said: Yes sir, the time is up *to-day;* I have heard it said that women went *just nine months*, and I thought I would send for you, and have you on hand.

My thoughts then began "to run thick and fast." What if "her time is up," according to her reckoning, as long as there are no indications of parturition, I wonder if she expects me to remain till it occurs! Suppose it should be delayed for two weeks, it will be a costly entertainment to them, and a losing business to me! How to smooth the matter over and get excused was now my great anxiety. Desirous of giving no offence, and at the same time to pave the way for my release, I remarked that while nine months was the ordinary time, still there was some uncertainty about it. Precision was impossible. Sometimes two or three weeks would elapse after the expiration of "the time," before confinement took place. In her case, *in particular*, as long as she was so well I thought she had better give herself no uneasiness about it, and in due time nature would give her fair warning—comforting her with the assurance of the "old doctor"—"when the *pear* is ripe, it will fall off." Still she was unwilling that I should leave—saying that "she had sent for me to have me in readiness, and as she preferred me to any one else, she did not like to have me go." Endeavoring to tell her how she would feel when labor-pains came on, and with the promise that I would be from home as little as possible—and being so near could be there in a few minutes after she needed me—she finally consented to my going—with the express condition that I should "make haste speedily" when she sent for me. Three days after this interview the summons came, and I fulfilled my promise to the letter—and after eight or ten hours she was safely delivered of a fine healthy child.

Perhaps the junior members of the profession need not be told that this was her *first* child.

MEDICUS.

PART SECOND.

AMERICAN AND FOREIGN INTELLIGENCE.

Art. I.—*On the varieties of the Human Race.*

The various points of difference which characterize the varieties or races of mankind, may be arranged into those which refer to the skull alone, and into those which are founded upon other and different portions of the body.

The craniological investigations of the last half century, with those of the last century, bid fair to afford us data for a much more enlightened classification of the human family than has yet been attained. The great works of Blummenbach and Morton, with those of Cuvier, Camper and Pritchard, have resulted in a more rational division of the human species.

The idea of the unity of origin of the human race, according to the present interpretation of Scripture, is beginning to be shaken by the investigations of the most learned ethnologists.

The writer of this lecture does not pretend to a sufficient amount of information on this important and interesting subject to form a decided opinion in the matter, but is free to acknowledge that the data of modern ethnologists, particularly those of his friend Dr. Samuel G. Morton, lead him strongly to the opinion expressed by this eminent naturalist and scholar. His words are as follows:—"I may here observe, that whenever I have ventured an opinion on this question, it has been in favor of the doctrine of the *primeval* diversities among men, an original adaption of the several races to those varied circumstances of climate and locality, which, while congenial to the one are destructive to the other; and subsequent investigations have confirmed me in these views."—*Catalogue of Skulls of Man and the Inferior Animals,*" by Dr. Morton.

I am well aware that Drs. Carpenter, Pritchard, and indeed almost all naturalists, have heretofore and do now hold to the present interpretation of Scripture, in reference to the oneness of mankind.

It must be recollected however, that the progress of Science, whether astronomical, geological, historical or ethnological, at the same time that it ultimately is found to coincide and even give strength (if this be possible) to Scripture truths, does, nevertheless, not unfrequently alter very materially the interpretation of particular passages. Who does not know that the promulgation of the Copernican system in astronomy, from the fact that this system conflicted with the interpretation of holy writ then in vogue, produced the most bitter and unrelenting persecution? The history of a Galileo is the history of opposition of preconceived opinions to physical, and may I not add immutable, truths! So, also, even in our own day, the truths of geology are rapidly revolutionizing the interpretations of Scripture, and producing that conflict which will always exist when new truths come in opposition to the prevailing opinions of men. Happily, however, a careful and manly exposition of these truths, and a clear demonstration of their harmony with divine revelation, is rapidly dispelling the mists of prejudice and overthrowing the opposition which is based on preconceived notions. So, also, with ethnological science, we doubt not when the whole truth shall be known, that no discrepancy will be found to exist between it and the revealed word of life.

It is true that the differences in the various races of mankind do not amount to what is technically termed a specific difference, that is, man at the head of the animal creation is but one species, the common definition of which is, that it procreates with its own species alone. In this case it is the more distinct, inasmuch as no hybrid or mule is as yet known to exist. The species is continued in all the varieties of the race, whether black, red, or white.

"Further researches (says Dr. Morton) into ethnographic affinities, will probably demonstrate that what are now termed the *five races* of men would be more appropriately called *groups;* that each of these groups is again divisible into a greater or smaller number of primary races, each of which has expanded from an aboriginal nucleus or centre. Thus I conceive that there were several centres for the American group or races, of which the highest in the scale are Toltecan nations, the lowest the Fuegians. Nor does this view conflict with the general principle, that all these nations and tribes have had, as I have elsewhere expressed it, a common origin, inasmuch as by the term is only meant an indigenous relation to the country they inhabit, and that collective identity of physical traits, mental and moral endowments, language, &c., which characterize all the American races. The same remarks are applicable to all the other human races."

Without discussing the points of difference in the various races of men, as found in the body in general, such, for instasce, as those of the hair, the skin, the pelvis, or other portions of the skeleton, I propose, first, to consider the peculiarities in craniological conformation, and secondly, to examine how far these correspond with some of the more prominent traits of character of the different races of men.

The chief differences in cranial developments of the various groups, are found to exist in their relative size as a whole, both by external and internal measurements, and the different proportions in which the several parts of the skull and brain are found. In order to understand the division of the human family, and to discuss with propriety these variations in the crania, it will be necessary to adopt some classification to which the measurement shall refer. This object has been attempted by a host of the best naturalists of the past and present century, no one of whose systems has been as yet generally adopted. Linæus referred all mankind to five races, viz: The American, the European, the Asiatic, and the African, and individuals of preternatural conformation. Buffon proposed six divisions, viz: 1. The Hyperborean or Laplander, which embraces the Polar nations; 2. The Tartar, which includes the Eastern and central nations of Asia; 3. The Southern Asiatic, embracing the South-Sea Islanders; 4. The European; 5. The Ethiopian; and 6. The American. He afterwards reduced the number to five, by uniting the Laplanders to the Tartars, inasmuch as he regarded the one as a degenerate branch of the other. The classification of the Count de Buffon was adopted, with certain modifications, by the distinguished Professor Blumenbach of Gottingen. Cuvier reduced the races still more, and made but three divisions, viz: The Caucasian the Mongolian, and the Ethiopian. Malte-Brun, on the other hand, makes sixteen races, denominating the American nations but one.

The system of Blumenbach, as modified by Morton, is, perhaps, in the present condition of ethnological science, the best. It is the one I adopt, and is as follows:

The whole human species is divided into groups and families. Of the first there are six in number, viz: 1. The Modern Caucasian group; 2. The Ancient Caucasian group; 3. The Mongolian group; 4. The Malay group; 5. The American group; and 6. The Negro group. The first group, or Modern Caucasian, is divided in six families, viz: The Teutonic family, embracing as members—1. The Germans; 2. The English; 3. The Anglo-Americans. Secondly, The Pelasgic family, embracing—1. The Persians; 2. The Armenians; and 3. Circasians, Thirdly, the Celtic family, embracing the native Irish; Fourthly, the Indostanic family—Bengalese, etc. Fifthly, the Semitic family—the Arabs. Sixthly, the Nilotic family—the Fellahs.

The second or Ancient Caucasian group, includes but two families, the Pelasgic or Græco-Egyptians and the Nilotic or Egyptians.

The third or Mongolian group, includes but one family the Chinese; while the fourth group or Malay, embraces two—the Malayan and the Polynesian families.

The fifth group or American, contains two families—1. The Toltecan, including—1. The Peruvians; and 2. Mexicans. Secondly, the Barbarous Tribes, embracing—1. The Iroquois; 2. The Lenape; 3. The Cherokee; 4. The Shoshone, etc.

The last or Negro group, has four families—1. The Native African family; 2. The American born Negroes; 3. The Hottentots; and 4. The Alforian family or the Australians.

It must be borne in mind that there are some three modes of making external measurements of the skull. The plan adopted by Professor Camper, is that in which the facial angle, named after the inventor of this process, is obtained by running a base line along the side of the skull, parallel to the meatus auditorius externus and the alveolar processes of the upper jaw, which is traversed or met in front by another, descending over the projecting portions of the forehead and face. This mode of measurement has been improved by the invention of an apparatus by my late friend Dr. TURNPENNY, called the Facial Goniometer, an accurate cut of which may be seen in Morton's Crania Americana.

The second mode is that made use of by Morton and Phillips, by which, with a little arithmetical calculation, the coronal, sub-coronal, and anterior and posterior regions of the cranium, are measured from the external surface. Under this head must also be enumerated the measurements made by ordinary callipers—such as the longitudinal, parietal, frontal, vertical, occipito-frontal diameters, &c.

Thirdly, we have the strictly phrenological measurements, which assume to give the size of particular regions and individual organs. These are accomplished by the craniometer, callipers, dividers, the above-named measuring frame, straps, &c.

Lastly, we have the very superior mode of measuring the solid contents of the cranium by means of shot, one-eighth of an inch in diameter, by which we obtain the *absolute capacity* of the skull or the bulk of the brain, *in cubic inches*. This plan we believe was first adopted by Dr. Morton, and adds greatly to the value of his cranial measurements made *by his own hands*.

It will not comport with the length and object of this lecture, to give the various external measurements of the skull, as found in the different groups or families of man. The measurements of Camper, which at best can give but an approximation to the size of the anterior lobes of the brain, place the most obtuse angle, consequently, the largest anterior lobes of the brain, in the crania of the modern Caucasian group; or, according to Pritchard, (Physical History of Mankind, 1, 288, 3d ed.: London, 1836,) the European, in which he says, the facial angle is as high as 80, while in the Mongolian it is 75, and in the African 70. We will not stop, however, to examine these external proportions, inasmuch as the customs and habits of the different nations modify the shapes of their heads, almost to an infinite extent, some elongating them backward, others forcing their crania and brains to grow upwards, while others by the application of pressure, flatten their heads in every direction. One fact has been established by the internal measurements of the skull, and that is, that in all the changes of form, the solid contents of the head are not changed, but remain the same under all the disfiguring processes to which they are subjected, and as the object in making any or all of these measurements is not so much to obtain the amount of bony matter in the head, as to understand the amount of brain, that process which will secure this, or an approximation to it, to us will be the best.

Two kinds of measurements are desirable—one which will teach us the *absolute* size of the brain, as a whole, and the other the relative sizes of its different parts. We conceive that the first is obtained by the process of Phillips and Morton, which is described as follows in the Crania Americana, p. 253:

"A tin cylinder was provided, about two inches and three-fourths in diameter, and two feet two inches high, standing on a foot and banded with swelled hoops, about two inches apart, and firmly soldered, to prevent accidental flattening. A glass tube, hermetically sealed at one end, was cut off so as to hold exactly five cubic inches of water by weight at 60 deg. Fahrenheit. A float of light wood, well varnished, two and a quarter inches in diameter, with a slender rod of the same material fixed in its centre, was dropped into the tin cylinder; then five cubic inches of water, measured in the glass tube, was poured into the cylinder, and the point at which the rod on the float stood above the top of the cylinder, was marked with the edge of a file laid across its top; and the successive graduations on the float-rod indicating five cubic inches each, were obtained by pouring five cubic inches from the glass tube *gradated*, and marking each rise on the float-rod. The graduations thus ascertained were transferred to a mahogany rod fitted with a flat foot, and these subdivided, with compasses for the cubic inches and parts. In order to measure the capacity of a cranium, the formina were first stopped with cotton, and the cavity was then filled with shot, poured into the foramen magnum, until it reached the surface, and pressed down until the skull would receive no more. The contents were then transferred to the cylinder, which was well shaken in order to pack the shot. The mahogany rod being then dropped down, with its foot resting on the shot, the capacity of the cranium in cubic inches is at once read off on it."

With the above apparatus, some six hundred and twenty-three crania, of various races and families of man, have been measured by Dr. Morton, and the following interesting results have been obtained by the process. The modern Caucasian group, embracing six families has the largest average sized brains, and of these the first family or Teutonic, including Germans, English, and Anglo-Americans, is pre-eminent for size of cranial contents, the mean being *ninety-two cubic inches.* The largest and smallest heads were found among the Germans, and measured respectively one hundred and four cubic inches and seventy cubic inches. The mean of the German and Anglo-American skulls was in both ninety inches, while that of the English was ninety-six. It must be recollected, however, that there were eighteen German heads measured, and but five English and seven Anglo-American.

The mean of the second family of this group, the Pelasgic family, embracing the heads of Persians, Armenians, and Circassians, was eighty-four, while the smallest was seventy-five and the largest ninety-four inches.

The Celtic family, which includes the native Irish alone, in six heads measured, had a mean of eighty-seven inches, the smallest being seventy-eight and the largest ninety-seven inches.

Thirty-two Bengalese heads had a mean of eighty cubic inches, while three Semitic or Arab heads had a mean of eighty-nine, and seventeen Fellahs averaged eighty cubic inches, solid contents. The smallest of these measured sixty-six and the largest ninety-six cubic inches.

The second or Ancient Caucasian group, including the Pelasgic and Nilotic families, or the Græco-Egyptians and Egyptians, averaged : the first, by which is meant Greeks settled and living in Egypt, eighty-eight cubic inches, and the second or native Egyptians eighty inches. There were eighteen Græco Egyptians and fifty-five Egyptian heads.

The Mongolian group includes the Chinese, of whose heads six were measured; their mean was eighty-two inches.

The Malay group, including the Malayan and Polynesian families, averages, for the first eighty-six, and for the second family eighty-three inches—total mean eighty-five inches,

The American group affords a large number of skulls from which to draw the mean contents, being one hundred and fifty-five Peruvians, twenty-two Mexicans, and one hundred and sixty-one of the Barbarous Tribes, viz: the Iroquois, Lenape, Cherokee, Shoshone, &c. The Peruvians average seventy-five inches; the Mexicans seventy-nine inches—these together form the Toltecan family; while the Barbarous Tribes above-mentioned average eighty-four inches, and the general mean of the whole American group is found to be seventy-nine inches, four inches, as we will see, below the average of two families of the Negro group. These families are the Native Negro and the American-born Negro. Of the first of these, sixty-two heads were measured, and of the last twelve. The mean of the other two families of the Negro group was found to be, in the Hottentot seventy-five, and in the Alforian or Australian seventy-five cubic inches.

"In this table (says Dr. M.) the measurements of children, idiots and mixed races are omitted, excepting only in the instance of the Fellahs of Egypt, who, however, are a blended stock of two Caucasian nations—the true Egyptian and the intrusive Arab, in which the characteristics of the former predominate."

"No mean has been taken of the Caucasian race collectively, because of the very great preponderance of Hindu, Egyptian and Fellah skulls over those of the Germanic, Pelasgic and Celtic families. Nor could any just collective comparison be instituted between the Caucasian and Negro groups in such a table, unless the small-brained people of the latter division (Hottentots, Bushmen and Australians,) were proportionate in numbers to the Hindoos, Egyptians and Fellahs of the other group. Such a computation were it practicable, would probably reduce the Caucasian average to about eighty-seven cubic inches, and the Negro to seventy-eight at most, perhaps even to seventy-five, and thus confirmatively establish the difference of at least nine cubic inches between the mean of the two races."

According to the same authority, the average size of the brains of the five groups above-named, in cubic inches, is, for the Caucasian eighty-seven inches, the Mongolian eighty-three inches, the Malay eighty-one inches, the American eighty-two inches, and the Ethiopian seventy-eight inches. The extremes in either direction in the respective groups will not materially affect the result or mean, and need not, therefore, be taken into account, inasmuch as these extremes may be, and probably are, the result of accidental causes. By the above table it will be seen that the Caucasian has the largest amount of brain, by five cubic inches, over the Mongolian. The Mongolian has one cubic inch more than the American, and the latter one more than the Malay, while the Ethiopian has three inches less than the Malay and nine less than the Caucasian.

The approximations would be much more satisfactory, could we have, in addition to the measurements of the whole brain, those of the individual parts. Physiologists are now fully willing to admit a difference of function to the several portions of the brain; and the best modern writers on this subject, Dr. Carpenter among them, admit that the cerebrum is the organ of intellectuality, while the cerebellum is more immediately connected with the animal, especially the voluntary motor functions.

Could accurate measurements be made with this view, they would throw much light on natural characteristics, as well as individual traits of character. As it is, the measurements, perfect as they are in reference to the whole brain can only instruct us in the general force of character exhibited by the different races of mankind.

It is a striking fact, that the race which seems capable of the highest mental acquirements, that which leads in civilization in its widest sense, is the one which has the largest average-sized brain. And it must be recollected, that the skulls from which these measurements were made, were of the lower classes of the community, while the skulls of most of the other varieties, with the exception, perhaps, of the Ethiopians, were from among the princes, chiefs and priests. Should the heads of the leading minds now in action in the Caucasian race be examined, they would doubtless give a much larger average than eighty-seven cubic inches. One head in Dr. M.'s collection, of a Dutch gentleman, measures one hundred and fourteen inches. At the same time it must be stated that the Hindoo heads, which form but a very small proportion of the Caucasian heads measured, "are probably smaller than those of any other existing nation. For example, seventeen Hindoo heads give a mean of seventy-five cubic inches."

The Mongolians measured, consist of Chinese and Esquimaux, and those of the latter give a mean of eighty-six inches, while seven Chinese give but eighty-two.

The Malays embrace Malays proper and Polynesians, while the Ethiopians were all unmixed negroes.

In reference to the American heads, the Peruvians were found to have the smaller and the Mexicans a larger amount of brain, and the Barbarous nations the largest amount of all — the proportions being, for the Peruvians collectively, seventy-six inches, the Mexicans seventy-nine cubic inches, and the Barbarous Tribes eighty-two inches.

These facts should be borne in mind in connection with the conquest of this continent. The facility with which the weaker Peruvian was overcome by the invader, the resistance of the Mexican, and the almost unconquerable ferocity and great resources exhibited by the various Barbarous Tribes, laboring as they do under all the disadvantages of ignorance of the arts of war and of civilization.

It is well known that these barbarous tribes are even now continually making inroads upon the civilized settlements, and require strong military resistance to keep them at all peaceable or within their own boundaries.

My next object will be to give a slight sketch of some of the prominent facts and traits of character presented by the several groups of the human family, in order that a comparison may be made between their history and their cerebral developments. And first, in reference to the Caucassian group, both Ancient and Modern. These remarks must necessarily be brief, and will be confined entirely to this group.

This group is divided into the Caucassian proper and the Persians; 2d. The Germanic family, divided into the Teutonic and Sclavonic varieties; 3d. The Celtic family; 4th. The Arabian family; 5th. The Lybian family; 6th. The Nilotic family; 7th. The Indostanic family.

A region remarkably fertile, between the Black Sea and Caspian, termed Caucasus, gives the name to these families, and their various sub divisions. The Caucassians proper are found only in the valleys and on the mountains of Caucasus. This locality has generally been selected as the spot on which the first of mankind existed, and from which many, if not all nations of the earth have been peopled. Among the varieties which inhabit this tract of land are the Circassians, celebrated the world over for their remarkable personal beauty, and we may add, while in their fastness for their courage and love of country. The successive autocrats of Russia have in vain squandered millions of men and money in the attempt to reduce these beautiful mountaineers.

"They are distinguished by a fair skin, arched and narrow eyebrows, very long eye-lashes, and black eyes and hair. Their profile approaches nearest the Grecian model, and falls little short of the beau-ideal of classic sculpture."—*Cran. Amer.*

They are shepherds and agriculturists, and in war, which is their pastime, active and vigilant.

The Georgians are as beautiful as the Circassians, with the same style of feature, but a darker complexion; are more literary and refined than their neighbors, but are less warlike, and fond of music.

The Abassians, Ositinians, Inguches and Kists, are smaller tribes, of more or less power, but degraded by the policy of Russia and the religion of Mahomed.

The second branch, or Persians, form the Eastern portion of the Caucasian family, and have always been distinguished, not only for their arts, literature, and general refinements and luxury, but at several epochs for their warlike propensities. They have, however, been over-run by Mongols and Tartars, who have so long amalgamated with them, that in the larger towns they can scarcely be distinguished from the latter. In the mountainous regions, however, they, like the Welsh in Wales, and the Highlanders in Scotland, retain many of their national traits, and indeed are said very much to resemble in person and general character, the Highlanders of the North of Scotland. Their complexion, however, is naturally sallow, and even almost black. These latter peculiarities are much modified in some regions by a mixture with Circassian and Georgian blood. This has much improved their physical beauty, and not at all deteriorated their intellectual powers. It is said, indeed, that there is not a man of rank or power from the King down, who is not descended, on the mother's side, from a Circassian or a Georgian. These men are generally tall, erect and graceful.

The Modern Persians are polite, and very accessible to flattery. The Court language is Turkish, and the religion Mahomedan. The Parsees and Ghebers, however, still worship the Supreme being under the image of fire, and are thence termed Fire Worshippers. We are all acquainted with the story in Moore's Lallah Rook of this sect.

Sir William Jones' account of this people, and his numerous translations from their language, of poetry, love and philosophy, have made Europe and America more or less familiar with their habits and modes of thought.

The ascendancy of the Mahomedan religion has, in modern times, been highly detrimental to their intellectual and moral developments.

The Ghebers or Fire Worshippers, who paid their devotions to the Almighty through the image of the Sun, have been the objects of the special vengeance of the followers of the Prophet. A chieftain of this sect is made the object and hero, with an Arabian maid, the heroine, of Moore's sweet poem, the Fire Worshippers. He introduces him to the reader in the following manner:

"One of that ancient hero line,
Along whose glorious currents shine
Names, that have sanctified their blood
As Lebanon's small mountain-flood
Is rendered holy by the ranks
Of sainted cedars on its banks!
'Twas not for him to crouch the knee
Tamely to Moslem tyranny;
'Twas not for him whose soul was cast
In the bright mould of ages past,
Whose melancholy spirit, fed
With all the glories of the dead,
Though framed for Iran's happiest years,
Was born among her chains and tears!
'Twas not for him to swell the crowd
Of slavish heads, that shrinking bowed
Before the Moslem as he passed,
Like shrubs beneath the poison blast—
NO—far he fled—indignant fled
  The pageant of his country's shame;
While every tear her children shed,
  Fell on his soul like drops of flame:
And as a lover hails the dawn
  Of a first smile, so welcomed he
The sparkle of the first sword drawn
  For vengeance and for liberty!"

The various Wandering Tribes, under the title of Iligats, Koords and Afghans, are Roving hordes, who are by turns, cultivators, shepherds, soldiers and freebooters.

The Pelasgic branch derives its name from Pelasgi, inhabitants of Thessaly. They were enterprising and migratory, and rapidly spread over all Greece and passed into Italy. In Greece they were the progenitors of the Acheans or Hellenes, having, for political purposes, assumed the latter name. In Northern Italy, they founded the colonies of the Etruscans, the most enlightened and refined people of this favored country, previous to the dominion of the Romans.

No man can visit the ancient cities of learning and art in Italy, without being struck with the beauty and finish of the domestic, ecclesiastic, and rustic utensils, which still remain in the museums of Florence, Rome and Naples, of this ancient people. They seem to have excelled all their neighbors in all the elegant arts, and the refinements of civilized life.

They long resisted the incursions of their more warlike neighbors, the Romans, but finally yielded, as all other nations have done, before a purely military spirit. They, however, left the remains of their refinement and intelligence, on which Rome built her literature and art, ere she conquered Greece and other more civilized portions of the globe.

The museums of Florence and Naples, and other portions of Italy, exhibit collections of culinary apparatus, agricultural implements, as well as surgical and medical instruments, which will vie successfully with the most approved of modern times. Some of the cooking stoves, for instance, in the museums of Naples, are at once small, compact, and so arranged as to accomplish the greatest number of purposes with the least possible expenditure of fuel. The silver knife and specula of the surgeon are there in their most approved forms—and even specimens of pills as well as loaves of bread in a most wonderful state of preservation, may be seen there. These, of course, were taken from the ruins of Herculaneum and Pompeii, and are therefore Græco-Italian. The beautiful urns, chaste vases, with basso-alto and mezzo-relievos, as seen in the museums of Rome, exhibit great taste, and a high degree of refinement. These are purely Etruscan, and their beauty has only been imitated, and not surpassed by anything since that time.

The division of the Pelasgi, which settled in Greece and the Grecian Islands, became, as we all know, the most polished and refined people the world ever saw. The contrast between them and the Romans is well drawn by Horace, where he says:

> "*Graiis* ingenium, Graiis dedit ore rotundo,
> Musa loqui, præter laudem nullius avaris.
> *Romani pueri* longis rationalibus assem
> Discunt in partes centum deducere."

—And in reference to the vast superiority of the Greeks in literature, enjoins on the student the daily and nightly perusal of their authors —

> "Vos Exemplaria Græca
> Nocturna versate manu, versate diurna."

According to Bory de St. Vincent, (L'Homme, 1, p. 40,) the unmixed Greeks are above the middle stature, of fine proportions and graceful mien. The forehead is high, expanded, and but little arched, so that it forms, with the straight and pointed nose, a nearly rectangular outline. This confirmation sometimes imparts an appearance of disproportion to the upper part of the face, which, however, is in a great measure counteracted by the largeness of the eye. The Greek face is a fine oval, and small in proportion to the voluminous head. The statues of the Olympian Jupiter, and the Apollo Belvidere, convey an exact idea of the perfect Grecian countenance. The Island of Cyprus, fabled as the abode of the Queen of Love, is still, according to the testimony of travellers, the residence of the most beautiful women. They are said to be the exact models of the Venus de Medici and other antique statuary. Whether physical beauty has any connection with intellectual pre-eminence or not, I leave others to decide, but it is said, as before stated, that in Persia the most beautiful men and women, and those who occupy stations of wealth and power, are descended on the mother's side from the Georgians and Circassians, who are known to possess the finest forms and fairest features of any other nation. The equable climate of the Grecian Islands probably contributed much, with their isolation from the main land, and consequent freedom from the tyranny of other nations, to make them the intelligent and polished people which they once were. The discussions of the Portico and the Lyceum have agitated the civilized world—and the philosophy then taught has in one way or other been the philosophy of Pagan as well as Christian Europe ever since. If Greece had produced but one man, and that man Aristotle, her fame would last to the end of time. The name of one of her warriors will live as long as military ambition and personal aggrandizement shall be passions in the human breast. The traits exhibited by an Alexander, in war, are only equalled in eloqence by his father, Philip of Macedon's most potent and inveterate enemy, Demosthenes.

The world will ever look to the magnificence and taste of Pericles, the wisdom of Solon, and the justice of Aristides, for models of everything that is noble, chaste, or appropriate in architecture, simple and wise in legislation, and just in the character of a public man. Under the former, the fine arts arrived at a degree of perfection which after ages have in vain endeavored to reach, much less excel.

The poetry of Homer, Pindar, Theocritus and Sappho, is comparable only to the Dramatic Writings of Sophocles, Euripides, and Æschylus. Euclid's Problems are the problems of the world. Xenophon's and Heroditus' Histories are models for all historians—while Hippocrates, Theophrastus, Erasistratus, and Dioscorides, will be considered the fathers of Medicine and Botany, as long as the healing art shall exist among men.

Morals, Navigation, Astronomy, Mathematics, and Poetry, have all, as is well known, flourished in the land of Hellenes, to an extent unattained in other lands. But alas, the iron rule of military power, before which the fairest creations of human genius have ever fallen, was permitted to bear sway over the isles of Greece; and Rome, with her comparatively barbarous hordes, overran the land of poetry and song—to be conquered in turn by the refinements of her conquered foes—when Greece, in the language of the poet, was "living Greece no more."

Long, however, before the political downfall of Greece, had her letters, philosophy and science entered the Roman capital, and excited the envy and spleen of her stern, patriotic sires.

Rome in after years became the military and political ruler of the then known world, yet was never able fully to maintain the unequal contest with Grecian literature and philosophy, and to this day the world still looks with eyes of gratitude to the sages of Greece for models in all that refines and elevates mankind.

True, the writings of Virgil, of Tacitus, Quintillian, Cicero, Cæsar, Livy, Terence, Horace, and many others, will long be looked up to as among the most exalted of human productions, in the particular branches of which they treat; but even these draw largely, and many of their best parts directly, from their Grecian brethren. Roman literature is but the phœnix of Grecian literature, and Roman architecture is but a bastard attempt, by way of improvement, on the perfect models of the Greeks.

These, however, were all of the great Caucassian family, and with their brethren and descendants have done their part to push on the great car of human advancement. Rome scattered at once her own and the civilization of Greece over Europe. Asia, and portions of Africa, and when she fell, her great members, Spain, Gaul, Germany, Britain, nourished the seeds sown by the sword, and to this day continue the culture of human science, and are foremost in all that elevates the race.

It is to be regretted that we have as yet no skulls of the ancient Romans or Greeks, with which to compare those of the modern Europeans. The tombs and catacombs of Europe will, it is hoped, be yet examined for specimens which will add much to Ethnological science. The catacombs and pyramids of Egypt have afforded specimens not only of the ancient Nilotic races, with all their mixtures and varieties, but also of more modern times, when the Greek had colonized this fair land, and amalgamated with the original inhabitants of the soil, as well as those who followed the Greeks in the possession of this country, the Roman.

The Saracen for a time, was the friend of Literature and Science, and even gave laws to large portions of Europe. His skull, also, should be examined, and compared with that of his more favored brethren of the Caucassian race or races.

But time will not permit my drawing out the parallel further, even in this great family of the Caucassians. Suffice it to say, the descendants of the ancient Germans and Gauls have shown themselves worthy recipients of the intellectual treasures bequeathed to them by their old masters, the Romans, and Literature and Science now find able advocates and cultivators among the French, German, Anglo-Saxon, and may I not add, Anglo-American?

May I not predict, that while Europe is convulsed with political and moral revolutions, that the Muses of Antiquity will find an asylum in the land of Washington and Franklin? That here, unencumbered by the bigotry and ignorance of ages, they may build their Parnassus—and the Portico and Lyceum send forth Aristotles, Zenos, and Platos among the great mountains and beautiful vallies of Columbia?

It appears to me that America is the legitimate heir to the great legacy first bequeathed to Greece by Egypt, then to Rome by Greece, and through Rome to the whole civilized world.—*Phil. Medical and Surgical Journal.*

Art. II.—*On the Peculiarities in Figure, the Disfigurations, and the Customs of the New Zealanders; with remarks on their Diseases, and on their Modes of Treatment.* By Arthur S. Thomson, M. D., Surgeon of the 58th Regiment of Foot.

Wounds and Injuries.—It was to be expected that wounds and injuries would be less frequent among the New Zealanders than the English, because there is no machinery, no building of high houses, no personal combats with fists, and no intemperance among them. The wounds of the New Zealanders heal with great rapidity. I have seen the most severe injuries do well. The famous chief, Hongi, the Napoleon of New Zealand, had a musket wound through the chest and lungs, and lived for several years with a hole in his back, through which he could produce a whistling sound by the expulsion of the air, for the amusement of his friends, when in gay humor. This wound was ultimately the cause of his death.

Diseases of the Eye.—This class of diseases is frequent. The most frequent form is conjunctivitis and scrofulous opthalmia, which affections terminate often in partial or complete opacity.

Diseases of the Skin are much more frequent among the New Zealanders than the English. The principal form is psoriasis and scabies, modified by neglect into a most inverate disease. Tinea capitis is frequent, and also herpes circinatus—ringworm. I have not seen nor heard of a case of herpes zoster.

There are hot springs in the interior, where the natives resort for the cure of cutaneous diseases, the beneficial effects of which may either arise from the sulphur they contain, or the cleanliness they produce.

Scrofula.—Under this term is included, almost entirely, cases of suppuration, or swelling of the glands of the neck, king's evil, and some cases of curvature of the spine. There are many other diseases which, with great propriety, might be included under this head; but, without them, it will be seen how painfully prevalent this obscure constitutional disease is among the aborigines of New Zealand.

In some districts, twenty per cent. of the adult natives, taken indiscriminately, are found with the cicatrices of sores on the neck; in other districts, ten per cent. These are not loose assertions, but numbers obtained from actual enumeration. All, however, who are scrofulous, do not bear on their bodies this outward mark, for "the seeds of disease are so hidden in their constitution, that even the healthiest men, to all outward appearance, are often the first to be aken."*

No medical man can look at a number of New Zealanders without observing, strongly marked, that peculiar physical development which characterizes the scrofulous diathesis. It is the bane of the whole race, and the remote and predisposing cause of almost all the sickness and mortality which occurs among them. In early childhood we see it producing wasting of the body, fevers and bowel complaints. After puberty, the swollen and suppurating glands in the neck point out that the disease still lurks in the system; from this period of life until death, exposure to the vicissitudes of the weather, poor food, and a variety of other causes, generate or excite scrofulous disease of the lungs.

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*Bishop Selwyn's Visitation Tour in 1848, published in "The Church in the Colonies," No. 20.

The internal use of iodine and cod liver oil has lately been found by Dr. Davis, the Colonial Surgeon at Auckland, to be a very efficacious remedy. Psoas and lumbar abscesses have been known to prove fatal, and a good many New Zealanders are seen with curvature of the spine.

The causes of this great prevalence of scrofula among them are—breathing an impure air in their sleeping houses, indolent habits, insufficient clothing, bad food, intermarriages with near and scrofulous relations, and change from a tropical to a temperate climate.

To enter minutely into all the above causes of scrofula is foreign to the object of this paper; but I may observe that the sleeping houses of the natives are low in the roof, small, and often below the surface of the ground, with a small door and a small window, both of which are shut at night; and for ten hours of the twenty-four the men, women and children respire an atmosphere which is as unwholesome as the most crowded and worst ventilated houses in some of the poor parts in London. In former days the constant dread of war and war itself—the uncertainty and difficulty of obtaining food, previous to the introduction of the fruitful European potatoes, made them exert themselves in fishing, killing birds, rats, gathering seeds, &c.; but now there is little dread of war, and a few days' labor is all that is required to plant potatoes sufficient for the year, and to collect a few pigs and sell them, so as to obtain blankets and tobacco. The rest of the year is spent in smoking, reading, talking, playing draughts, the indolent occupation of cleaning flax, and sleeping. There are a few persons in some tribes engaged in commerce, and in cultivating wheat, but these are the exceptions to the general rule. Their clothing is not sufficient to protect them from the weather. It is a loose gown of common calico (a round-about) buttoned or pinned round the neck, and a rug or blanket overall; the children are similarly clad, and you often see a mother and her infant crouching under a scanty and threadbare blanket. In former days, the quantity of fish eaten was much greater than at present. Potatoes are now more easily got, and are more easily cooked; besides, they have a way of preparing potatoes and maize which is very injurious. It is by making them putrid before they eat them, by steeping them in water. This is evidently a modern evil, the injurious effects of which, I am of opinion, are very great. Intermarriages with near and scrofulous relations must also cause and aggravate scrofula: this is often difficult and impossible to prevent, and the New Zealanders have no inborn dread to incest. I know an instance of a man who has two wives; one of them is his grown-up daughter, and she is the mother of three children to him. The last cause of scrofula among them is their migration from a tropical to a temperate climate. The New Zealand race keep an exact enumeration of the generations which have passed away since their arrival in New Zealand, and according to this it is probable they arrived in New Zealand from the tropics about six or seven hundred years ago. In the tropics, the climate has an average temperature of 84° Fahr.: the country they now live in has a mean temperature of 60° Fahr. There are not many instances of the aborigines of the tropics migrating to the temperate zone in large bodies, but in every instance which has occurred the migration has proved unfortunate.

There are many objections to this last cause of scrofula, and I admit it is difficult to comprehend how a race would increase for several hundred years in an uncongenial climate, and then suddenly decrease; but from a careful examination of the question, I am clearly of opinion that change of climate must be considered as one of the exciting causes of scrofula, for the New Zealanders flourish best in New Zealand where the climate is warmest, and worse where the climate is coldest.

All other Diseases.—The number of causes included under this head are much more numerous among the English than the aborigines of New Zealand.

During the year 1851, in different parts of the North Island, mumps (cynanche parotidæa) prevailed as an epidemic, and the metastatis to the testicle was several times observed; a few cases of diseases of the heart are recorded, and from the prevalence of rheumatism I am surprised they are not more frequent; hydrocele now and then occurs; otitis and deafness are met with, and are most frequently produced by want of cleanliness. Eight cases of erysipelas have been treated, five of them occurred at Kororariker, in the Bay of Islands, in 1838, when that place was a scene of intemperance; and it is probable this habit may have had some influence in producing the attacks, as I never saw a case of erysipelas among them in Auckland.

The New Zealanders are not intemperate; they will drink spirits if it is given to them, and they like the excitement which it produce; but a New Zealander with a shilling in his pocket will rather purchase a loaf than a glass of spirits. Scurvy is a rare disease. Dracunculus, or Guinea worm, is unknown. Elephantiasis Arabica (elephant leg), which is very common among the Polynesians in the tropical islands in the Pacific, is almost, I was going to say entirely, unknown in New Zealand; but I recollect seeing a native in the interior of the north Island with modified elephantiasis of the left leg. Inguinal hernia occurs, and proves occasionally fatal; I saw a strong young man die from strangulated hernia. Double inguinal or labial hernia has been seen in a female; and umbilical hernia is common among children, in consequence of the custom of cutting the cord too short, with the shell which they use for that purpose; it generally disappears after the first few years. I have heard of no bad result from it.

Cancer.—From very careful inquiries, I have not heard of a native woman dying from cancer or carcinoma of the breast. If the disease should occur, it must be extremely rare indeed. This remarkable peculiarity deserves particular attention; but the absence of the disease from among the New Zealanders is another link in the chain of evidence, that cancer is a disease of civilization. Sir Astley Cooper recommends a diet of animal food as a means of cure in cancer; but the absence of the disease among a people who live almost entirely on vegetables, would indicate a different opinion. As cancer is said to be rare among the inhabitants of Egypt and Algeria, a migration to these countries has been recommended to those suffering under the malady. The same may be said of New Zealand. But I have already said that, although the aborigines do not suffer from it, yet European women have had the disease commence in the country; and there are no European women sufficiently old, who have been born and brought up in New Zealand, so as to ascertain whether they are liable to the disease or not.

Stone in the Bladder.—No case of this disease has been seen, nor have I heard of one. As Professor Cooper has calculated that one case occurs annually in England for every hundred thousand souls, we might naturally expect, out of a population supposed to be nearly one hundred thousand, that ten years' constant intercourse would have brought one instance of stone under the notice of some of the Europeans living in the country, had the disease existed among the

New Zealanders. The vegetable diet, and the large quantity of pure water which the New Zealanders drink, tend to produce urine of a low specific gravity, and comparatively free from urid acid.

Bronchocele.—I heard of one supposed case of this disease, but on inquiry found it to be scrofulous tumor. There is in the north island of New Zealand, in which almost all the native population live, a large quantity of magnesian limestone, which cannot fail to impregnate the water passing through it; but I have visited villages in this part of the country, but never saw a case of bronchocele. This circumstance furnishes no argument against the theory of the magnesian origin of bronchocele, because the aborigines rarely use well water, and they are very particular that the river water they use is clear and tasteless. If, then, there is one thing more than another the New Zealanders are particular about, it is the purity of the water they drink. Thus, well water is rarely used, or a stream which runs through a wood, where decayed trees are likely to be found.

Hydrophobia has not been seen either among dogs, Europeans or natives. The absence of the disease in New Zealand is a link in the chain of evidence, that the malady has its origin in specific contagion. There are many dogs in the country, and some of them are very badly fed animals.

Tetanus.—I have not seen nor heard of either an idiopathic or symptomatic case of tetanus among the aborigines.

Diseases of Infancy.—A large number of children die under three years of age. The poor diet on which the mother lives produces thin and watery milk; sometimes the milk is scanty, and food is given to the child which it cannot digest. This produces bowel complaints and fever. Neglected catarrhal complaints from insufficient clothing often produce death. Dentition is occasionally accompanied with irritation and convulsions; the last complaint is not so common as among European children; croup proves fatal; worms are very frequent. Tabes mesenterica occurs, but the poor food infants have given to them lays the foundation of a delicate sickly life and a premature old age.

Diseases of the Organs of Menstruation.—As there are a large number of women in New Zealand barren, it may be supposed the menstrual discharge is often irregular or diseased. I have inquired into this subject, but it is a difficult question to arrive at the truth of, because the native women rarely consult Europeans about this class of diseases; from the inquiries I have made it appears that the menses begin to flow at thirteen, fourteen, fifteen or sixteen. I have heard it stated they begin at ten years of age, but this is not usual. I never saw a New Zealand girl have a child who in appearance was not at least fifteen years of age. I have seen European mothers younger. Sexual intercourse takes place often before the menses appear. The menses are sometimes very irregular, one or two months often passing without a flow; women occasionally have headache a day or two before the usual period of the menses, but no uneasiness is felt after this. I have heard of some instances of menorrhagi; profuse menstruation occurs. From all inquiries, I am of opinion that the New Zealand women are subject to the same irregularities as women in England; but these irregularities are perhaps not so common, nor do they appear to have so much influence on the constitution. This opinion is founded, however, on no statistical data. Hysterics and chlorosis, the two maladies most influenced by the menses, are almost unknown. I have heard of a half-caste girl who had chlorosis. The sterility which the New Zealand women suffer from, is perhaps caused by too early and promiscuous sexual intercourse. I have been told that women have a way of rendering themselves barren by injuring the womb, but as my informant, one of the clergy of the Church Missionary Society, says it was never attended with loss of life, I am inclined to doubt it. Count Strezlectri in his "Physical History of New South Wales," published in 1845, states that when once a female of the aboriginal tribes of Australia has borne a child to a European or white, she ceases entirely to reproduce with males of her own race. I doubt the truth of this among the aborigines of Australia, and can deny its accuracy regarding New Zealand women, for I know several instances of New Zealand women having children with men of their own race, after having had children by Europeans.

Parturition is not attended with the same danger as among Europeans. Many missionaries and medical men never heard of a woman dying in childbed. A native chief aged about fifty, told me that out of a tribe numbering 4,000 souls, he could only recollect ten instances of women dying in childbed. This is about one death in three years out of 2,000 women. The circumstances which caused death, the chief said, were hæmorrhage and cross-births; one medical man was called to a woman with an arm presentation, and another to a protracted labor, the result of a deformed pelvis. Child-bearing extends from fifteen to thirty-five years of age; but I have heard of a woman whose age, from certain known circumstances, must have been forty-seven when she gave birth to a child.

New Zealand women often give birth to large families. Twins and triplets occur; but three children born at one time have never been reared. I knew a woman who had fifteen children, all dead. When a woman has a protracted labor, it is assisted by violent pressure on the abdomen. I saw a young female who was suffering from extensive ulceration of the muscles of the abdomen, which had come on after a protracted labor. It might have been produced by too violent pressure. Abortions occur, and are often caused and produced by pressure on the abdomen, or sitting over a native oven, such as will be afterwards described. I never heard of a woman with puerperal convulsions. Infanticide is generally perpetrated, the moment the child is born, by pressing the head between the thighs.

Child-bearing is usually easy with the New Zealanders. A New Zealand woman, the bearer of a burden, with a party of travelers, was confined on the road; after the birth of the child she walked four miles, and next day fifteen. They rise almost immediately after the expulsion of the after-birth. As soon as a New Zealand woman finds her labor about to commence, she takes a blanket and goes out into the open air, into a quiet retired place. If it is her first child, a woman attends her; after the first child they go out alone. After delivery, the woman proceeds to a stream and washes herself and her infant, and then returns home. During labor, the women kneel down, with their thighs apart, and having their hands resting on a tree or stick. They hold their breath. Labor seldom exceeds two hours; generally it is much shorter. Sickness after parturition is rare. The great ease of child-birth may be partly due to the pyramidal shape of the skull. Prolapsus uteri after child-birth is rare. In a large village, containing four hundred women, there was only one woman who had this disease.

Epidemic Diseases.—According to all accounts, there have prevailed during the last sixty or seventy years, three fatal epidemics; one called Maripa, or makoko, broke out after the arrival of a European vessel in Mercury Bay, sixty years ago, and proved fatal to a great many persons. It had a dysenteric character, and caused death after a few days' illness. About five years after this, another pestilence broke out, called rewarewa, and so many died that the living could not bury the dead. It commenced among the natives in the north part of the island, and had a dysenteric character. Tangara is the name of a pestilence which visited the island, and carried off great numbers, the nature of which I cannot ascertain. Since the settlement of the British Government in New Zealand, in 1840, there have been three epidemics—influenza, whooping-cough, and mumps. The first has been prevalent twice, and whole villages were prostrated by it. Whooping-cough and mumps are said to be new diseases; the former prevailed as an epidemic in 1847, the latter in 1851.

On the method in which Diseases were treated by the New Zealanders.—The instinct to live, which is so strong in the human breast, has made men, in all ages, endeavor to procure means to ward off death. Among the New Zealanders, the desire to live was as strong as among other races of men; yet the idea which existed in their minds, that all diseases are inflicted, directly or indirectly, by the gods for their sins, or by witchcraft, made them resort to prayers in place of physic for a restoration to health. I insert four out of the many prayers which were used for the treatment of disease, so as to convey some idea of their nature and style:*

He Kopito.—Kopu nui, kopu roa, kopu takitaki, kopu whakaahu tena te ara te hamama na kawea kowhitia, pararitia, pupa, nau mai ki waho.

Translation of the above Prayer for Swollen Stomach.—Big belly, long belly, stretched belly, bursting belly; there is the passage open, take it hence, pluck it out.

He Korere.—Titi puru e, titi puru e, titi kohea, titi maiami, e tena te titi ka titi, tena te puru ka puru, ko te puru ra tena, i purua ai te tupuna a Houtaiki.

Translation of the Prayer for Looseness of the Bowels.—Stop up the looseness, stop up the looseness, the purging will subside, the purging be stayed: there is the purging and there is the stopping up, for this is the remedy that stayed the malady of thy ancestor Houtaiki.

He Manawa.—Kei te manawa, kei taku kei taku manawa kei te manawa whena, he manawa kaukau. Tina ki roto whakataka atu ki roto.

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*I am indebted for these prayers, and for their translations, to Mr. C. O. Davis, of Auckland, one of the few persons in New Zealand intimately acquainted with the language and modes of thinking of the New Zealanders. The translations are literal, but it is a difficult subject, for few of the present generation of Maoris are acquainted with these prayers, or even the exact meaning of the words, and the difficulty is increased by the circumstance that many words have five or six meanings.

Translation of the above Prayer for Disease of the Heart, or Shortness of Breath.—It is in my heart, on it is my breath, and in thy breath it is in thy heart, and my heart, in the heart that is strenuous. Let it be overpowered inside, let it be strenuous inside,† let it be thrust back inside.

He Hono.—Tutakina i ou iwi, tutakina i ou toto, tutakina i ou mongameya tena terangi, ka tutaki, tena te papa ka whena.

Translation of the above Prayer for a Sprained Back.—Close up your bones, close up your blood, close up your marrow, and be united as the heavens, and let the bones be strong as the earth.

Confidence was not, however, placed in such stupid compositions as the above, the exhibition of substances to cure diseases were occasionally resorted to ; but the exact value of prayers and medicine will be at once appreciated when I state, that medicine, without the assistance of prayers to the gods, was totally inefficacious. New Zealanders have no idea of the circulation of the blood, nor any of the proper functions of the different organs of the body. The head, although extremely sacred, is not supposed to contain the organ which produces the intellect. The stomach and bowels are believed to be the seat of some of the faculties of the mind, such as joy, fear, and sorrow. Every external part of the body has a name, and a good many of the internal parts. Their cannibal feasts gave them an opportunity of acquiring anatomical knowledge.

The New Zealand mode of treating surgical cases was often successful and judicious. For a broken bone, splints were made, from the bark of trees, in the shape of the part, and bandages were made from the flax plant. Dislocations were reduced. Sprains were treated with rest and shampooing. They never performed amputation. Scraped roots and leaves were applied hot for boils and sores. Abscesses and boils were opened, often long before they were ripe, and severe pressure applied to squeeze out the matter. The surgical instruments employed for opening abscesses were the sharp edge of a shell, a splinter of obsidean, or a sharp-pointed stick, or a thorn. If a person received a wound, it was first washed, and then a plaster of mud applied to exclude the air, and this was allowed to remain until the wound was well; sometimes the wound, if small, was bruised with a stone, to excite bleeding, and afterwards held over the smoke of a fire of certain plants. The bleeding from a wound is sometimes checked by holding it over the smoke of a fire. For cutaneous diseases and sores, bathing in the hot sulphur and siliceous springs at Roturua Taupo, and at several other places, is reckoned very beneficial. For rheumatism, scarifications were made in the skin, or friction and shampooing with the fat of pigeons and whale oil, were used. In lumbago, stones were heated and rolled over the part. Change from one part of the country to another was an esteemed remedy for certain diseases, not for the climate, but to avoid the evil spirits which produced the sickness. Blistering a part was known, and it was done by the application of the leaves of certain plants—e. g., clematis. Local bleeding by scarifying the skin was known, but not venesection. Hæmorrhage from a wound was checked by bandages, and stuffing the wound with mud. Diseases which were particularly supposed to be caused from the devil, or an atua, living in the body, were occasionally starved out, *alias* the patient killed; at other times they were pressed out. Mr. Nicholas, a settler in the Thames, told me that, 1848, he saw a person killed by an attempt to drive out the atua. A young, healthy New Zealander had a pain in his stomach; he was laid out naked on the ground, heavy baskets of stones were placed on his chest and stomach, on the top of which several persons sat for about a quarter of an hour; when they were removed the unfortunate man was dead—from suffocation, I presume, in consequence of the movements of the lungs being impeded. The evil spirit, in this case, was effectually expelled, but with it went the vital spark.

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† This most probably refers to the god who is supposed to be in the heart of the sufferer.

Vapor and hot-water baths were often used in the treatment of diseases. The vapor bath is made by digging a hole in the ground about two feet deep, and as large as is required; into this a number of very hot stones, about the size of a large orange, are put, a quantity of water is sprinkled over the stones, and over them a thick bed of the leaves of the plants which are supposed to be efficacious in the cure of the disease are spread. The patient either lies down on them, or sits on them. In the former case, the body is covered with a mat and a layer of earth; in the latter with a mat or blanket. The steam generated by the water on the hot stones rises through the leaves, envelopes the body, and produces a copious prespiration. This bath is often given; sometimes the patients are kept in it from sunrise to sunset, but generally for two or three hours. Vapor baths are constructed at Roturua over some of the hot rocks found in this volcanic district.

Mode of Making the Hot-Water Bath.—This was not so often used. Captain Cook was wrong when he said the New Zealanders were ignorant of any way of boiling water; they have a highly ingenious way, which they used in giving hot baths. It is of heating stones very hot, and throwing them into cold water contained in a large wooden bowl. The water soon boils, and the heat is kept up by throwing in fresh hot stones. During the heating of the water, certain trees and barks are put into it, which they impregnate with their properties. It is a medicated hot-water bath, and is chiefly used for cutaneous diseases.

Mode of Recovering Persons who have been long under Water.—The body, immediately after being taken out of the water, is suspended, head downwards, over the smoke of a fire; if there is any life in the person, the smoke produces irritation in the nostrils, and sneezing. After this effect is produced, the body is put before a fire, and hot water poured down the throat.

Nominal List of Plants used as Medicine by the New Zealanders, and the Diseases for which they are supposed to be beneficial.—The expressed juice of the Mesembryanthemum (pig's ear,) Nat. Ord. Ficoideæ, is used for boils. The leaf and root of the native flax, Phormium tenax, Ord. Asphodelæ, is used for ringworm, bandages, and various internal complaints. The bruised leaves steeped in water of a pepper-shrub, called Horopito, Drimys auxillares, Ord. Magnoliaceæ, is used as a remedy for cutaneous disease. The leaf of the Kahikatoa tree, Dacrydium excelsum, Ord. Coniferæ, is used in the form of decoction for urinary and other internal complaints, and in the steam bath. A decoction of the Kareao, Ord. Loranthеæ, is used for secondary symptoms, and to produce abortion; the young shoot is eaten to cure the itch; The leaf and bark of the Kawakawa, Piper excelsus, Ord. Piperaceæ, is used for cuts, wounds, cutaneous disorders, gonorrhœa, and in making vapour baths. A weak infusion of the Kohekohe, Hartighsia spectabiles, Ord. Meleaceæ, is used to stop the secretion of milk. Mosses found on trees, when dried and reduced to powder, are rubbed into the skin for cutaneous diseases. The Kokowai (red ochre) is used for sore heads and wounds. The leaves of the Kopakopa, something like the plantain, are used to bandage over ulcers; one side of the leaf draws and the other heals. The tender leaves of the Koromiko, Veronica segustrifolia, Ord.

Scrophalerineæ, are bruised and applied as a poultice for ulcers, and especially venereal ulcers. The inner bark of the Kowai tree, Edwardsia microphylla, Ord. Leguminosæ, is used for itch. The bruised pith of the Mamaku, Cyathea medullara, Ord. Filicies, is used as a poultice for swollen feet and sore eyes. The infusion of the bark of the Miro, Podocarpus ferruginea, Ord. Coniferæ, is drunk for pain in the stomach. An infusion of the root Mouku, a fern, is used as a wash for cutaneous complaints. The bark of the Ngaio tree, Myoporum læteum, Ord. Mysporinea, is applied to ulcers and cutaneous eruptions. Charcoal from any wood was used in a state of powder for cutaneous eruptions. The pith of the Ponga, Cyathea medullara, Ord. Filicies, was used as a poultice for cutaneous eruptions. The inner bark of the Poropora, Solanum lacineatum, Ord. Solanea, is used for the itch. The bark of the Pukatea, Laurelia Novæ Zelandiæ, Ord. Atherospermeæ, and the bark of the Rata, Metrosideros robusta, Ord. Myrtaceæ, are used for cutaneous diseases. The infused bark of the Rimu, Dacrydium Cupressinum, Ord. Coniferæ, is employed to dry up ulcers, and for wounds of all sorts. The water in which potatoes are boiled is used as a lotion for cutaneous diseases. The boiled blood from the ear of a dog is used as a remedy for spear-wounds. A decoction of the Ti, Cordyline Australes, Ord. Asphodelæ, is used for dysentery. The leaf, tender shoot, or pith of the Tutu, Coriariea Sarmentosa, Ord. Coriarieæ, is used for dysentery; it is very poisonous to animals and men; when a man has eaten the seeds and stalks of the tutu, and shows signs of poison, he is put under water for nearly half a minute; his stomach is by this means filled with water; he is then taken out and rolled on the ground, until he vomits. The expressed juice from the seeds of the tutu is a favourite drink of the New Zealanders; it is not poisonous, and is very pleasant. The juice of the leaf of the Puatanatana is used as a blister.

There are several other plants used by the natives to cure diseases. Different parts of the country use different substances. None of them are very active. Neither purgatives nor emetics are much used. A large portion of the remedies are to cure cutaneous diseases, a very significant proof of their great frequency. There are few remedies for pectoral diseases, or indeed any internal or obscure malady. Much of the above information relative to the plants used in medicine is procured from the Rev. Mr. Taylor's "Leaf from the Natural History of New Zealand." The natural orders given, I have arranged from a French work, entitled "Choix de Plantes de la Nouvelle Zealande Recueillies et Decribes, par M. E. Raoul, Chirurgien de premiére classe de la Marine Royal, 1846."

Their Physicians.—From the New Zealanders' ideas about the pathology of diseases, the priests were their only useful medical men. When called to a sick person, the first thing done was to consult the gods as to the termination of the malady; there were several ways of doing this, but the most common was to pluck up a piece of fern, if the root came up clean and free from earth, a favourable prognosis was given; if, on the other hand, much earth adhered to the root, an opposite opinion was given. The sick were conveyed into the bush away from the village, and a small place built for them, and the place was tapued—when a sick person recovered, fern root or some other food was cooked, and a portion was set apart for the gods—the tapu was then removed. When a person was bewitched, the priests were summoned to drive the witch away; the incantations of the priests in such cases were generally performed near water, where they professed to see the spirit depart. In some cases the witch was transferred from one person to another. I have seen a woman have nothing the matter with her, almost die from the belief in witchcraft; she rapidly recovered on a priest visiting her, and repeating a short prayer. The tapuing of the sick, and their removal from among the healthy, is merely an extension of our laws for the prevention of contagious disease.

PART THIRD.

BIBLIOGRAPHICAL NOTICES AND REVIEWS.

American Medical Association.—Eighth Annual Meeting.

About the time that our May No. made its appearance this body commenced its session in Philadelphia.

The number of delegates in attendance was 510—more than have ever been present at any former meeting.

The States represented were Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Alabama, Tennessee, Kentucky, Ohio, Indiana, Illinois, Michigan, Iowa, Wisconsin, Missouri. From the District of Columbia there were also delegates; also from the U. States Army, U. States Navy and the Parisian Society.

On the morning of Tuesday, May 1st, the Association was called to order, and Dr. C. A. Pope of St. Louis, the President, delivered his annual address, as follows:

Gentlemen:—With feelings of grateful pleasure, I meet you, and greet you, on this occassion.

For high and useful purposes, have we assembled from the wide extent of our beloved country. The elevation of a noble profession —the promotion of science—the good of humanity—these have been, are, and will continue to be, the objects of our Association. Whether we have, thus far, done much or little, our sole aim has been the advancement of the best interests of our fellow men. I shall not assert that we have done as much as we might have done, or that the course hitherto pursued by us, is so perfect, as to admit of no improvement. Were such the fact, and were the Association a firmly established institution, I might have experienced more hesitation in the selection of a theme for the present occasion. And since we cannot, as yet, I think, urge such a claim, the few suggestions which I shall offer, are made with becoming diffidence, but at the same time with a deep sense of their importance to the welfare and perpetuity of our Association.

Some strictures on our proceedings, in medical and other journals, have appeared within the last year, as well as in previous years. I shall not here blame the authors of them. They are, doubtless, as proud of our noble profession as we, and equally with us, anxious for the advancement of its interests and its honor. I thank them for their suggestions. All of us are ready to hear them and to profit by them. If any more effectual mode of arriving at truth can be devised, than that which we have heretofore pursuc, all of us are ready to follow it, and would rather thank than quarrel with those who may propose it.

Physicians have an almost superhuman mission to fulfil. The goal of their ambition, and their hopes and their duty, stands at the *ultima thule* of human capacity—nay, rather beyond it. It cannot, indeed, be said, that their duties are beyond their powers, but their ambition, their hopes, their wishes certainly are. They would gladly know, not only all the secrets of organization, but those also of physiology, pathology, and therapeutics. To arrive at such knowledge, is, perhaps, beyond the attainment of the human mind. Multiform are the elements which enter into the problem of health and disease. Health is, itself, a constant change of composition—diseases are ever-varying changes, supervening on this.

Do we know, with all our advancement, and after all the toil of our predecessors for two thousand years, the exact changes in which any disease, the fevers for instance, consists ? And even when we shall have learned these, so as to understand them as well as the most ordinary chemical changes, the ever-varying character of most diseases, and the inward disturbing influences upon them, of the mental and moral emotions, would require to follow them, a continued stretch and power of intellect, of which it is doubtful if man be capable. This exactness of knowledge is not, I grant, necessary to the very successful practice of medicine. Our profession can render great and important services to man without it, but with it, it would be still more serviceable. To it our ambition tends. To this perfect knowledge we aspire. Although we may never reach, we can yet eternally approach it. In the vast region of our researches, there is no probability that human genius will ever, Alexander like, weep for the want of unconquered provinces. Beyond the conquests of the future heroes of the profession, there will always be a boundless field for the ambitious and philanthropic explorer. In the language of a western student, "the science of medicine, like the liver of Prometheus, is sufficient to glut the eagles of all time."

The object of this Association is to do something to advance the profession towards the far-distant goal of perfection—to aid the solution of some of the problems and enigmas of life and organization—to add some material to the growing temple, whose foundations were so firmly laid by the Coan sage—and to do its part as best it may, in the cause of humanity. Nor do I think, that so far, it has altogether failed. Many valuable contributions to science have been elicited—professional ambition has been stimulated—an *esprit-de-corps* has been successfully evoked and established. The strength of the profession has acquired additional power by the union of its members. This Association has been to physicians, what the railroad and electric wires are to commerce, and the interchange of useful knowledge to States and nations. It has made us one, and as I have just remarked, in unity there is power. This Association has stimulated thought. Chaotic and void, would forever remain the masses of facts, accumulated by the observations of ages, but for the co-ordinating and logical power of reason. It sits in judgment on the silent phenomena, as a "refiner of fire, and a purifier of silver." It forces the voiceless facts to mount the tripod of the oracle, and speak forth words of wisdom. The scalpel, the crucible, the microscope, may be subsidiary to its purposes and ends, but they cannot supply its place. Fixed and patient thought, in medicine, as in the other departments of science, is the Aladdin's lamp, that lights the footsteps of the discoverer. To stimulate attention and thought, is to accelerate many a new discovery—to hasten the advent and establishment of important principles yet in the womb of the future. May not our Association do this more effectually than it has hitherto done ?

Let all the contributions be read and attentively considered. Such a course would certainly be more encouraging, as well as more respectful to their authors. Let the reports be deliberately and fully discussed, and let them go forth to the world with the sanction or criticism of the Association. This would require time, it is true, but if we have time to meet at all, surely a few days would make but little difference. The good that would be effected would yield a tenfold compensation for the time employed. Every one must admit that three or four days is too short a time for the Association rightly to fulfil its annual mission.

I would, moreover, respectfully suggest that time be taken for the discussion of some of the leading topics of medical philosophy. Amongst these, may be mentioned the nature, causes and treatment of cholera, yellow fever, *et cetera*—hygiene, and the laws of health affecting masses of men—quarantine—the cases of mortality among children—the chemical and vital doctrines of life. Questions like these, indicated a year in advance for discussion, would excite a carefulness of investigation, and a degree of attention and thought which could not fail to clear away much of the darkness and doubt in which they are yet shrouded. Nothing so sharpens the intellectual powers as public debate. It fixes attention, and strains to the utmost every faculty. I have no hesitation in saying that facts enough have been accumulated to establish great and general principles of which the medical world is yet in ignorance or doubt. Nothing would contribute more to demonstrate these principles than the collision of matured intellects in public debate. What a mass of facts, and argument, and demonstration, would be brought to bear on any of the subjects alluded to, if some of the best minds in the profession were to debate them, after a year's preparation! Observed facts are the crude materials of science—the intellect is the master builder of its august temple.

I make these suggestions for your consideration. All the scientific meetings in this country and in Europe, employ more time than ours has hitherto employed. Evidently we must protract our sessions, if we would render them as serviceable to science as they may be. No member of the Association will be required to remain longer than suits his wishes or convenience. Some fifty or sixty, more or less, would always be found to listen with eagerness to scientific papers, and engage with pleasure in scientific discussions.

The time has probably arrived, for a change in our plan of organization, which will admit of the selection of a permanent place for the future meetings of the Association. There are evident advantages incident to both the migratory and stationary plans. These might, perhaps, be easily reconciled and secured. A proposition if I mistake not, was made some years ago, by the Smithsonian Institution, and I would respectfully suggest, whether it would not be in accordance with the best interests of the Association, to hold biennial meetings in Washington, and the alternate ones, as now, at different points of our common country. We might thus secure all the advantages of a fixed abode, in the way of preserving the archives, making collections, etc., whilst by meeting in various localities, we could not fail to excite that wide-spread interest among the profession, and obtain such accessions of new members as would greatly enhance the high and useful objects of our Association. Should this proposal meet with your approbation, I would further intimate that policy would perhaps require the meetings of the Association at the National Capital, to be held in the years of the short sessions of Congress.

I shall say but little of the legislative duties of the Association. I shall say nothing of the propriety or impropriety of getting laws passed to regulate the practice of medicine, and furnish standards for candidates for the Doctorate. Perhaps the Association can do but little in this respect. Ours is a popular government, and the people are disposed to allow the largest freedom in everything pertaining to medicine, medical schools, and physicians. Laws passed against quackery one year, are revoked the next. Our country is the paradise of quacks. All good things have their attendant evils, and this unbridled liberty is one of the evils of popular government. May we not hope, however, that even this evil may disappear, as general education and the cultivation of the masses advance ? At any rate the people are not yet disposed to put down the quacks, nor to require too high a degree of qualification for those of the regular profession. After all, laws can make only mediocre physicians. They can require the candidates to know only so much—to be qualified to a certain degree ; and this degree will always be far lower than that to which the true lovers of knowledge would attain, without any legislation on the subject. The greater lights of the profession cannot be manufactured after any process of legislative enactment. Thirst of knowledge, self-love, philanthropy, burning ambition—these make the great physician and surgeon. These have made all the worthies of the past—not legislation. Legislation cannot drive the drone to the proud heights of professional eminence. When these heights are reached, it will be seen that the successful aspirant has been stimulated by a stronger power.

To him the laurel blossoms of renown and the life-giving mission of his art, are dearer and more attractive than was the mystic bough of the sibyl to the eager Æneas, or, than the golden apples, guarded by sleepless dragons, to the Hesperian daughters.

Whatever course you may think proper to pursue, I am sure that your objects will be, the advancement of science—the good of mankind—the honor and glory of the profession. We have the dignity and character of a noble calling to sustain—of a profession which has numbered, for two thousand years and more, some of the wisest and best men in all countries and all times. It is no trival matter to sustain the rank and respectability of a vocation which can boast of a Hippocrates, a Harvey, a Hunter, of the most erudite and benificent of sages and philanthropists the world ever saw—of a profession which has furnished to every nation its *clarum et venerabile nomen.*

On the eve of the battle of the pyramids, Napoleon exclaimed, Soldiers! from the height of yon monuments, forty centuries look down upon you. Gentlemen, from the heights of past ages, countless worthies of our God-like profession point and beckon to a goal more elevated than that which attracts legislators and conquerors, Solons and Cæsars.

We did not arrive in time to hear the address. Those who did hear it delivered, spoke well of the *manner* of the young Missourian. The *matter* is very good. It shows that the author is capable of looking over the whole ground, estimating properly what has been done and what there is still to do in order to give the profession the greatest possible degree of usefulness and certainty in its results.

The following are the officers for the present year:

President—Geo. B. Wood, of Pennsylvania.

Vice Presidents—Wm. M. Boling, of Alabama; Daniel Tilden, of Ohio; D. Humphry Storer, of Massachusetts; Grafton Tyler, of the District of Columbia.

Secretaries—Francis West, of Pennsylvania; Wm. Brodie, of Michigan.

Treasurer—Caspar Wister, of Pennsylvania.

Committee on Publications—Francis G. Smith, of Pennsylvania, Chairman; Francis West, of do.; R. C. Foster, of Tenn.; Samuel L. Hollingsworth, of Pennsylvania; H. S. Askew, of Delaware; Samuel Lewis, of Pennsylvania.

Ohio had 26 Delegates, as follows: Levi. D. Scheetz, J. C. Williams, R. Hills, R. B. Leonard, J. F. Potter, E. Gaston, R. R. McIlvaine, C. D. Cotton, A. Cary, A. Dunlap, R. D. Mussey, Daniel Tilden, T. W. McArthur, A. M. Johnson, Wm. Clendenin, T. H. Baker, W. S. Battle, A. Evans, C. G. Comegys, Thos. Wood, S. M. Smith, Jno. Dawson, J. P. Walker, O. D. Norton, Jno. F. Holston, Caleb Jones—26.

On the 2d the Association took a recess for the purposes of visiting Independence Hall. A number of ladies were present, and the Hall was crowded to its utmost extent.

Dr. Isaac Hays, of Philadelphia, on behalf of the Association, introduced the members as follows:

ADDRESS OF DR. ISAAC HAYS.

MR. MAYOR:—

I have the gratification of introducing to your Honor the Members of the American Medical Association—our National Medical Congress. This Association was organized, in our city, eight years ago, and has met annually since in one of the principal cities of the Union. It is composed of delegates from the Medical Societies and Colleges, Hospitals and other Medical Institutions throughout our country. It was instituted with no selfish views, but to accomplish objects of the greatest importance to the public at large ; to improve the healing art, and increase its powers for alleviating human suffering. It strives to attain these ends by securing more complete and thorough courses of instruction to students, and by raising the standard of requirements of those admitted into the ranks of the profession;—by investigating the causes of the diseases which prevail in certain localities, and by seeking the way by which these causes may be removed, or their effects counteracted;—by collecting reliable histories of the different epidemics which, from time to time, spread over our country, and by endeavoring to discover the means of arresting their progress;—by offering prizes for the most useful discoveries and improvements in medicine ; and by promoting every measure tending to enlarge the boundaries of our science or increase the efficiency, and augment the usefulness of our art.

In pursuance of these objects, the Association has assembled this year in your city, and we feel deeply grateful to you for your courtesy in inviting us to visit this place, so venerated by every American heart.

The philanthropy of our profession is not restricted to the cure of disease—it has a larger range ; it embraces within its scope whatever tends to the improvement of our mental or moral condition, or even to confer "the greatest good upon the greatest number." Hence the profession have never been indifferent to national objects ;—on the contrary, they flatter themselves that they have not been behind any other class of the community in patriotism, but that they have been always prompt to serve their country, not only in their professional capacity, but also by their counsel in the Cabinet, and even by taking up arms for her defence in the field.

I need not remind your Honor that the most illustrious physician of his day, in this country, the late Dr. Rush, was a member of the Congress of '76, and affixed his name to the Declaration of Independence; or that General Joseph Warren, one of the most eminent physicians of Boston, contributed by his eloquence to rouse his townsmen to resist the oppressive acts of the mother country, and shed his life's blood on Bunker Hill in defence of liberty,—or that his younger brother, Dr. John Warren, animated by the same spirit, volunteered as a private soldier; nor need I refer you to other examples of a similar character. But I *may* assure you that the spirit which animated our ancestors, if it appear dormant, is not extinct in our bosoms, and that while standing on this spot—sacred to human liberty—we experience emotions kindred to those which the inspired Lawgiver must have felt when he heard the voice calling to him out of the midst of the burning bush : " Put off thy shoes from off thy feet, for the place whereon thou standest is holy ground."

REPLY OF MAYOR CONRAD.

Mr. Chairman of the Committee of Arrangement:—

I thank you in the name of the community which I have the honor to represent, for your eloquent introduction of our friends to the authorities of the city, and to this the Hall of Independence.

Gentlemen of the American Medical Association:—

I am proud of the privilege of extending to you, in the name of the government and of the people of Philadelphia, a most cordial welcome.

I bid you welcome to our city—a city which, deriving a cherished distinction from the profession which you adorn, is eager, now and ever, to requite it, in her tribute of respect for the professors. I welcome you to our people, whose intercourse, for many a year, with you or your brethren, has inspired a feeling which, reserved as we are sometimes said to be, will, I doubt not, burst into earnest and unambiguous expression, before you leave us.

I welcome you, gentlemen, to this Hall, but not as strangers or the sons of strangers—for it is your own. As the temple and territory of Delphos, in the wildest domestic perturbations of Greece, afforded one sacred area over which the cloud of discord never gathered, one altar whose worship was never invaded, this spot, consecrated to our common American glory, knows no lines of latitude, and belongs, in truth, no more to us, whose peculiar privilege it is to inherit its guardianship, than to our brothers—*to you.* In coming hither, therefore, you *come home.* These precincts have been hallowed for all time, by the heroic virtues of your and our fathers. This is the fountain from which the living waters of American liberty were first drawn, and it is therefore most sacred—(wo to the generation in which it ceases to be sacred!)—but, like the well of the Patriarch, all the tribes of Liberty's Israel own here an equal right, and owe here an equal homage.

In no sense, then, can I greet you as strangers—for yours are names familiar to every American proud of the science of his country; and those who are united, by this association, in a cause so lofty as that eloquently characterized by your Chairman, may not only claim the universal and acknowledged privileges of the Republic of minds, but the rights of a nearer and a dearer charter, the Brotherhood of benificence—the kindred claims of noble hearts, knit in the highest and holiest of human aspirations. In this spirit, with the most fervent and fraternal sentiments of respect and regard, I greet and welcome you.

You are right, Mr. Chairman, in claiming, amid the associations which hallow these precincts, a peculiar privilege for your profession—a profession which not only sprinkled, with the earliest sacrificial blood of the Revolution, the highest altar upon which Valour vowed and dedicated our country to freedom—I refer, as you have referred, to Dr. Warren and Bunker Hill—but which, in every struggle for the enlargement and enlightenment of human destinies, has been eminently distinguished for courage, zeal, and fidelity to the rights of man. You have, therefore, a peculiar right to claim kindred here, and have that claim allowed; and within these walls, which witnessed the zeal of Rush, it would be a treason to virtue to forget, that one of the lights of your profession shed glory upon the solemn debates of this hall, and was foremost amongst those that bade yonder bell* (preserved and devoted to the veneration of posterity,) with its iron tongue, to *proclaim liberty throughout all the land, to all the inhabitants thereof.*

It is the glorious peculiarity of your profession that, while Ambition, in its ordinary and most applauded paths, plays the part of the *Destroyer*, and wins glory at the expense of human life and happiness, you and yours, with a more exalted civilization, a nobler heroism, have ever *sought to save.* Next to the highest of all human courage—if, indeed, it be merely *human*—that of the martyrs of religious Truth—the courage of the physician, whether on the battlefield or in the lazar-house, the courage of science and humanity, is most sublime, and best entitled to the *clarum et venerabile nomen.* The vulgar courage of the warrior, under the base stimulus of passion, or the low greed of applause, can hardly be compared to the noble intrepidity of the surgeon, who gleans, in the ruthless and red-handed reaper's path, the leavings of the battle; and still less with the hero of the hospital, who encounters the grim antagonist in the horrid silence and gloom of the pestilence. Imagination can hardly embody an instance of human courage and virtue more sublime and unearthly than that of the physician, who, in the midnight of a plague-stricken city, thrids the fetid solitudes of its alleys, and, entering the devoted hovel of the wretched, ministers—while only Pestilence and Misery, Death and God look on—to the perishing. I need not step from this spot to grasp the hand of many a hero who claims no laurel—many a noble philanthropist whose sacred labors, in scenes like these, have been unmarked, save by the Eye that never slumbers, and remembered only by Him who alone can reward.

To such a profession, one venerable from its antiquity, noble from the grandeur of its objects, illustrious from its achievements, and which demands every aid and energy of genius and science, of head and heart, that dignifies the race, it is not strange that, go where it may, a ready homage greets and a ready blessing attends it. In our own city, all that is noble in patriotism, all that is exalted in science, all that is bright and beautiful in the arts which refine society, all that is lovely and cherished and holy in private life, combine to render the profession sacred and dear to us.

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* *The Liberty Bell.*—This is the bell which was rejoicingly rung, from the steeple of the old State House, when the Declaration of Independence was originally read in July, 1776, to the thousands assembled in the State House yard, now Independence Square. Upon this bell—cast long before the Revolution, and brought from England in the colony times—are the prophetic words of Scripture quoted—"Proclaim liberty throughout the all land, to all the inhabitants thereof."

There are few living to whom some one death in the past is not the sole event and solitary memory of the survivor's life—to him a lonely pyramid in the melancholy desert; and to such a mind and memory, *the debt of the death-bed*, where science, rendered holy by its office, ministered, though never paid, is never repudiated. I never knew a good man, still less a good woman, who had not such a debt—a debt which bankrupt gratitude cherished with its holiest affections and sanctified with its devoutest memories.

In these times, when the omnipotence of associated effort is invoked for so much that is of dubious merit, it is a gratifying spectacle to behold the enlightened professors of the most exalted of all arts—men sage and grave, unselfish and unaspiring—forsaking the homes to which they are bound by the affections and the afflictions of thousands, by wealth, and fame, and influence, to wander, wearily, away upon a pilgrimage of hundreds of leagues, in the cause and interests of the human family, its security, health, and happiness. For more than ten years, the representatives of your profession have thus gathered in Convention. What other body of our citizens have made a like effort—a like sacrifice? Selected from the most eminent of the profession, the delegates have been men whose years, like their virtues, were many. How difficult must have been, to them, the effort to burst through the bonds of a relying and clinging practice! They have already visited, in this duty, the cities of every section of our wide country. How many have fallen by the wayside? How many martyrs could you not thus number in this cause? How many of the good and great of the profession have, in these benevolent pilgrimages, joined the ranks of the thousands who have sacrificed themselves, at the requisitions of duty, as recognized and enforced by your self-imposed laws—joining the dead in the effort to aid the living? The epitaph of the Spartans at Thermopylæ might well commemorate the virtues and the fate of these martyrs. But if the cost has been great, the results have been commensurate.

Of the professional advantages attained, though I know them to be invaluable, I will not presume to speak; but I may be permitted to state, as health is the most important subject of municipal provision and care, that the transactions of the Association, which I have examined with great interest, comprise much that merits the attention, and will reward the respectful consideration, of the municipal governments of the Union.

It is natural that Philadelphia should feel, as she does feel, a profound interest in the cause of medical education in this country. She cannot, of course, forget that it was here that the first medical college was established in this country; that its merits and success extorted a reluctant transatlantic tribute of admiration; and that, progressing rapidly, but wisely, it achieved and maintained an equality with the most celebrated institutions of the Old World. As the cause of medical education has expanded, and institutions worthy of the cause and the country have sprung up, each triumph, thus attained, has been regarded here as the successful outbursting of an offshoot from the primary effort; and Philadelphia, while rejoicing in the expansion and elevation of medical education throughout the land, has almost fancied—so earnest is her interest in medical education—that she had a right to indulge a *parental* pride in all that advances that interest.

These genial feelings have been maintained, in all their early and fervid freshness, by constant intercourse with all sections of the country. The ingenuous and gallant youths that have come hither for medical instruction have, in their unstudied intercourse, exhibited the character of their respective States in a light so generous and exalted as to win our affections, not only for themselves, but for the communities and States which could exult in them as their own. Winter after winter, we have had many of these noble young spirits among us. And let me remark that, rigorous as I am said to be in the administration of the law, I have yet to know the first occasion to rebuke, much less to punish a medical student. We have found them as gentle and decorous in their deportment, as they are exalted in their aspirations; and had Philadelphia—eminently catholic in her affection for her sister communities—needed a lesson of love and loyalty, these high-hearted missionaries would have taught it. This interchange of sympathies has endured for the third of a century—may it last forever! The youths—youths no longer—who formerly bore those sentiments to the remote sections of our republic, stand before me now as the revered sages and ornaments of their profession, meeting here the evidences of a reputation which had preceded them, and has long been cherished by us. And who can tell what have been the results of this kindly interchange of kindly feelings? It has doubtless been felt in every commercial, social, and political relation of life, correcting the prejudices, harmonizing the discords, and subduing the dangers of our common country.

We realize these facts. We recognize, in the members of an enlightened profession like yours, so many patriots and philanthropists, engaged in the great and general interests of the human race; and, apart from the mere scientific acquisitions of your annual meetings, we perceive in them results auspicious to all that we cherish, all that is kindly, forbearing, and conservative, between man and man, party and party, State and State, section and section; and, so regarding them, we hail and greet you with a welcome as sincere and cordial as the heart can conceive, or the tongue can utter.

These addresses are very creditable to their authors. Mayor Conrad's shows that the profession of Medicine is most appreciated where best known. Philadelphia has enjoyed in an eminent degree, the opportunity to become acquainted with men and things medical, and we see in the address of the Mayor, how her citizens have been impressed. Notwithstanding the reverses temporary, that as a profession, we have from time to time sustained, on account of the thousand and one forms of empiricism, the ultimate result of public feeling must be such as that exhibited at Philadelphia.

At the meeting of the State Society of Ohio, for 1854, a resolution was passed in regard to the patenting of Medical and Surgical Instruments, that conflicted with the National Code of Ethics. Dr. Clendenin, of Cincinnati, brought the matter before the Association, by offering the following resolutions:

Resolved, That no State or local Society shall be hereafter entitled to representation in this Association that has not adopted its Code of Ethics.

Resolved, That no State or local Society that has intentionally violated, or discarded any article or clause in the Code of Ethics, shall longer be entitled to representation in this body.

A motion to lay the above on the table was lost.

Dr. Miltenberger, of Baltimore, offered an amendment, which was amended by Dr. J. L. Atlee to read as follows:—

Whereas, It has been brought before the notice of the American Medical Assocation that the State Medical Society of Ohio has violated, at their last meeting, Sec. 4th, Art. 1st, Chapter 2d, of its Code of Ethics; therefore be it

Resolved, That the Secretary of the Association be directed to inform the officers of that Society, that unless such action be rescinded, they cannot be hereafter represented in this Association.

These were added to the resolutions of Dr. Clendenin, and adopted unanimously; the delegates of the Society in question, being forward in support of them.

We happened to be present when these resolutions were offered, and took the liberty to state that we regretted very much to see the Association troubled with the necessity of calling the State we had the honor in part to represent, to an account for such conduct, but that inasmuch as the matter had been brought forward, and that too by a delegate from Ohio, we wished to see the Association act promptly upon the subject—pass the resolutions that were before it. We further stated that the resolution passed by the State Society of Ohio, violating the National Code of Ethics, did not express, in our humble opinion, the sentiments of a majority of the members thereof, nor the feelings of the great body of the profession in Ohio, and that if the action of the Association was right, we had no doubt but that the State Society at its ensuing session would rescind. Such has been the case. The State Society, at its late session, by an almost unanimous vote, has done itself the credit to again step up on the National Platform, and we are again in *statu quo*.

Clinical Lectures on Pulmonary Consumption. By THEOPHILUS THOMPSON, M. D., F. R. S., Fellow of the Royal College of Physicians, London; Physician to the Hospital for Consumption and Diseases of the Chest. Philadelphia: Lindsay & Blakiston. 1854. For sale by Riley & Co., Columbus.

Consumption is certainly one of the most important diseases which can occupy the attention of medical men. The single fact that in England, nearly one sixth of the entire mortality is attributed to this vicegerent of death, and that in the Eastern portion of our own country, it occupies an equally conspicuous place in the lists of mortality, will be sufficient to arrest our attention and lead us to bestow more than a passing glance at any book which increases our information on such a subject. By this we would not wish it to be understood that we intend any elaborate inquiry into the nature of the "materies morbi," to discuss the history and pathology of tubercle, but rather to dwell upon the more practical points which it is useful for every practitioner to be informed upon, viz: the first symptoms, which can be recognized—any circumstances which modify its course and influence its duration.

We may properly premise that our author has enjoyed more than usual advantages for the investigation of Thoracic diseases, from his position as Physician to the Hospital for Consumption at Brompton, near London. That he has availed himself of them to the fullest extent, none will doubt who read his book.

What do we really know about Consumption? Have we really made any progress in our knowledge of its real nature, or do we only more effectually conceal our ignorance under a guise of learning, than did our forefathers. Is our confession of ignorance so ingeniously made, garnished with so many technical quips an quirks, that it passes with the good natured, credulous world, as a creed and explanation,—repeated in many cases so often until we accept it as a solution ourselves? We are afraid it is too much so, and that we silence our questioners more with hard words than solid reasons. Is this statement too sweeping? Let any one seek the definition of Phthisis in the books of the best authors of the past five years—compare the statements of Ancell, Williams, Gulliver, Henle, Reinhardt and Virchow, as to the production and nature of Tubercle, each differing from the other, and answer for himself. Then let the inquirer if he will, turn to Sydenham, Morton and others of the older writers, who, without pathological science at their command, used sharp eyes and possessed powers of shrewd observation; or, even farther back to the times of Hippocrates, Cælius, Aurelianus, and Ætius, and the comparison will not furnish him with so much cause of gratulation at our advancement as he might expect! Yet though we may glean no answer to the inquiry of "What is Phthisis," to which grave objections may not be urged fatal to its accuracy, as a scientific definition, we may at any rate gain somewhat to assist us in the investigation, and of great importance in a practical point of view—viz: that the local lesion, the deposit and developement of tubercle in the lung or elsewhere, is not the sole disease, but that antecedent to these local disturbances is an abnormal state of the system essential to their production. The exact nature of this abnormal condition we know but little of, and the disease is scarcely recognized in the generality of cases, until it has produced a palpable result—the deposition of tubercles and their natural sequences. Unfortunately, it is this latter stage of tuberculosis, which has too often occupied the exclusive attention of authors, so that while the signs, by which the course and history of pulmonary consumption may be traced, are as well and as generally known, as those of any other disease, it is equally true, that hardly a disease exists, of which so little is with certainty understood in regard to its accession and incubation. Nevertheless, in this stage only is success to be expected in treatment, in the great majority of cases. To hesitate until what are everywhere understood as the evidences of "Phthisis" reveal themselves, is to lose the golden opportunity, and thenceforth the treatment becomes merely paliative. How important then is the question *what are the first signs of Consumption?* We omit those general considerations that excite our watchfulness in certain individuals, such as hereditary tendencies, occupation, &c.

Remembering how much light physical exploration has thrown upon thoracic diseases, we shall doubtless seek its assistance, and inquire, what has it revealed concerning this matter? It has enabled us to distinguish the various thoracic diseases from each other and with respect to Pththisis it has cast a perfect flood of light that enables us to track with absolute certainty the downward progress of of the tuberculous. But to detect the first signs of departure from health, it either has failed, or what it has contributed to that end, is too much overlooked and undervalued. This is partly due to the fact that we expected too much at first from this source, still more, we think to certain circumstances connected with the history of Percussion and Auscultation, too seldom recognized. It may very properly be asked, whether as a rule with those authors who have directed attention to the exploration of the chest, the tendency has not been to refine and divide the phenomena into too great a variety of sounds, above all, to add names which do not represent the sounds heard by one to another man's understanding, rather than to simplify and collect the various different sounds according to their significance and value. We do not undervalue physical exploration; far from it, for we believe nothing has tended so much to give an impetus to rational medicine, as the discovery of Laennec and the careful observations of his followers, but the tendency of specialism is to ultraism, to overstate the value of minutiæ, until to an inexperienced reader they all appear to have equal importance. This disadvantage ensues, that not rocognizing the less pronounced sounds, he becomes discouraged. He forgets, (or perhaps the stress placed upon these refined points, has misled him) that for diagnostic purposes, there are certain leading features to be seized, to which the others are but subsidiary. Let him study to acquire a good knowledge of those, and these will almost insensibly follow. The precise limit of a cavity need not be marked out, but to detect its existence within a lung, whatever its size, is of essential moment. The more expert explorer may compass the former task and triumphantly vindicate his skill, at the ensuing autopsy, but he has not, by such topographic accuracy, added one essential item to influence the diagnosis or treatment of his patient. So the determination of the precise character of a "ronchus" or "rale," which may be heard, is of secondary importance to the solution of the two easier questions: "Is the sound abnormal?" and "Where is it heard?" Every educated practitioner should be able to solve these, whereas the former may often reasonably be beyond his skill, or even of the more accomplished auscultator. Thus, abnormal sounds at the upper part of the chest, in one or both lungs, whatever their character, even if other diseases—pneumonia for instance—be present, should always excite anxiety, lest masked by these, the more formidable Phthisis be also present, and in such cases, long after apparent convalescence from those diseases ensues, it is proper because it is a safe precaution to be on the look out for any evidence of its approach. All this may seem trivial, but we have met with several men, who have thought auscultation and percussion obscure, because they overlooked these very considerations, and of course they undervalued its teachings. We were glad, therefore, to find that so eminent an auscultator as Dr. Thompson, has called attention to the bewildering phraseology which has enveloped this subject, and we earnestly recommend the perusal of his introductory chapter to the student of auscultation, and even to the adept. Returning from this digression we resume our consideration of the early signs of Consumption.

Early in Phthisis, perhaps among its very first signs, we find a *prolongation* of the expiratory movement, increasing as the disease advances, "until instead of occupying as in the natural state, a fourth part of the period of healthy inspiration, it may even come to exceed in duration, the inspiratory murmur." The same symptom is also found in emphysema, but with the rational symptoms so different that few would be led astray. Besides, in the latter case, the resonance of the chest on percussion, is increased while in Phthisis, it is either natural or somewhat duller. Respecting the value of this symptom Dr. Thompson remarks:

"Among 2000 consumptive patients, it proved to be the most remarkable of the physical signs in 288—those cases presenting bronchial complications being excluded. Hæmoptysis had occurred in 91 of these cases, that is in 31 per cent.,—a proportion calculated to confirm my opinion of the significancy of the prolonged murmur, and at the same time sufficiently below the average frequency of Hæmoptysis, in the first stage of Phthisis, to support the assumption that the prolonged expiratory murmur takes precedence of other characteristic signs, which are commonly assumed as requisite in in order to prove the existence of consumptive disease." p. 147.

"Prolonged expiratory murmur slight in degree, if heard only on the right side is inconclusive, but if confined to the left, is far more significant. The more limited the space over which it is heard, the greater the probability that Phthisis is the cause. The persistency of the sign for a considerable period, if unattended with symptoms of bronchitis, emphysema or pneumonia, indicates some permanent obstacle to the free exit of the air, and in a majority of instances this obstruction is of a tubercular character. In cases depending on pulmonary congestion, the expiration, after cupping and other appropriate treatment, usually resumes its natural character; but excluding this and other complications before noticed, I have not recorded any instance in which this sign, once fully established, ever ceased to be obvious, unless superseded by other signs."—p. 148.

He also says that in many instances this symptom preceded cough. Another interesting but less valuable auscultatory sign which occurs early in consumption is a modification of the inspiratory sound called by Laennec *l'inspiration entrecoupee,* and by some writers "jerking inspiration," which gives too great an idea of suddenness in the performance of inspiration to be accurate. Our author prefers 'wavy inspiration,' as the sound resembles the advancement of successive waves upon the shore.

We have already alluded to the importance to be attached to any abnormal sound heard in the upper part of the chest as cause for suspicion of ulterior evil. We cannot enter into the physical signs of confirmed Phthisis, but pass at once to the evidences gained from the state of the vascular system.

The aid of the microscope has been sought to see if any difference exist between the blood of tuberculous and healthy persons, so that by pursuing the inquiry to gain some evidence in this way of general tuberculosis, before it has become localized. Our author thinks something may be learned by observing the length of time the blood corpuscles consume in their morphological changes from round discs to stellated and corrugated bodies, and that this process takes place with much greater rapidity in phthisical than in other persons. Repeated and numerous observations alone can confirm this suggestion; till then this result must be received with due caution.

More within the range of ordinary observation is the appearance of the gums, where frequently "a mark at the reflected edge of the gums, usually deeper in color than the adjoining surface, and producing a festooned appearance by the accuracy with which it corresponds with the curve of the gingival border; this mark is in some patients a mere streak, in others a margin sometimes more than a line in breadth. In the most decided cases this margin is of a vermillion tint, inclining to lake."—p. 171.

It is most distinctly marked as a general rule around the incisor teeth, but frequently it is apparent around the molars. Its obvious direction is somewhat influenced by the shape of the mouth. Among 21 consumptive *men,* the tinted line was evident in 20;—in both jaws in 16;—of the rest in the upper jaw alone in two,—and in the same number upon the lower jaw. In one patient thus examined it was absent. In 21 phthisical *women*, there were 8 without margin, yet having signs of advanced phthisis; 11 had both jaws marked, and in the remaining 2 the lower jaw alone was marked. Of both classes, 7 males and 7 females were only in the first stage—6 males in the second—8 males and 14 females in the third. Its early appearance is afterwards alluded to. Dr. Thompson thinks that its absence in cases of otherwise well pronounced phthisis, may be regarded as a favorable indication as to the susceptibility of improvement, and the presumed duration of the disease. A comparison of the occurrence of this symptom and that of clubbed fingers is derived from tables of 38 men examined—of these 23 had their fingers more or less clubbed, and all in whom this was obvious had the margin—10 had the margin but not clubbed fingers. In the same number of women 22 had clubbed fingers, of which 21 had the margin and in one it was absent—in 10 the margin existed without the clubbed fingers. When once established, Dr. Thompson thinks it is permanent. We cannot enter into an explanation of this phenomenon; to such as feel interested in it we must refer to the book itself. Dr. Thompson concludes from his own experience—

> "1st. That the absence of the streak in men affected with inconclusive symptoms of consumption may incline you to a favorable interpretation of any such suspicious looking indications—but that in women rather less weight is to be attributed to this negative sign.
>
> "2d. That the presence of the sign in women is almost conclusive evidence of the existence of the tubercular element in the blood.
>
> "3d. When in either sex it coincides with a pulse not materially altered in frequency by change from the sitting to the standing posture, the presence of phthisis may with high probability be assumed, even before having recourse to auscultation."—p. 184.

We need only add that the observation is very readily made and the symptom easily recognized by a careful observer.

Increased frequency of pulse is present, even in very early periods of phthisis, in the same ratio which in other diseases co-exists with circumstances disqualifying the individual from exertion. Of course the degree of acceleration is relative, according to the healthy rate of each person affected. Among 20 patients in which the stage of softening was reached, only one had a pulse below 90. The pulse of consumption differs in other respects from that in health. The natural pulse is found by Drs. Knox and Guy to be slightly lessened in the number of its beats towards evening. If the pulse of a man in health be felt while he stands, it will be found that the number of beats exceeds by 13–18 the amount of the same when the individual sits on a chair with his back supported, and in cases of debility the difference thus caused is still greater. In phthisis, on the contrary, the pulse is accelerated towards night, and the difference induced by change of posture very much less even in the morning than in health, and still less in the evening, when the degree of fatigue from the daily wear, would naturally have a reverse effect. In some consumptive persons no difference at all is produced by change of attitude. One other disease presents a striking analogy to consumption in this respect, viz: Hypertrophy of the heart. Change of position has but little influence on the pulse in that disease. The late Dr. Clendinning determined from his investigations that the heart was, proportionably to the whole body, greater in Phthisis than in other diseases, and Dr. Thompson enters into a calculation of 32 hearts of those who died of phthisis, where the result agreed with that conclusion, notwithstanding the extreme emaciation of body present in all the cases. These are subjects worthy of more extended observations.

Dr. Thompson gives a tabular statement of the reduction of "vital capacity" found in consumptive persons. This is determined by an instrument kept in hospitals, called the 'spirometer,' by which the capacity of the lungs for air is measured. This is beyond the reach of most of us.

Not so, however, the falling off in weight, which is often the first distinct symptom (excepting perhaps a cough) which attracts the patient's own attention to his declining health. To estimate this truly, it is necessary first to have an average healthy standard. Dr. Hutchinson, quoted by Dr. Thompson, gives the following results from an immense number of observations. According to him,

persons 5 feet high should weigh .... 120 lbs.
5 feet 4 inches, " .... 140 "
5 feet 8 inches, " .... 160 "
6 feet, " .... 180 "

And so on, 5 lbs. for every extra inch. We cannot help thinking this is too high an average to be applied to this country, although doubtless correct as applied to the English. We have not made as extended observations as we could wish, but from those we have been enabled to make, we are satisfied that the average should be reduced from 10 to 15 lbs. below this.

The occurrence and character of the cough and expectoration are also alluded to at length, and the cycle of changes which the latter passes through minutely described. Dr. Thompson does not allude to the disorders of the digestive functions, and the liver and the thoracic pains pointed out by Dr. Bourbon* in the Archives de Medicine for April, 1853, as occurring so often in the inception of Phthisis, an omission we much regret.

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* American Medical Monthly, volume 1, page 66.

Such are most of the earliest symptoms of Consumption, easy to be detected, but most important in their character. The persistence of any one of them may reasonably excite attention, while the presence of several will always cause the deepest apprehension for the future.

On one other point we must follow our author—what influence have certain symptoms often attendant upon Phthisis, upon its duration? These are especially Hæmoptysis and Fistula in ano. As to the former, Dr. Thompson thinks that when moderate in amount it must be regarded as rather beneficial than the reverse, and his general experience leads him to believe that its occurrence tends more to retard than to accelerate a fatal issue. In Dr. Thompson's table a period generally of from a year to fifteen months, in some cases even extending to two years previous, is noted, at which period hæmoptysis appeared. Dr. Walsh, in his report as to the Hospital for Consumption, made in 1849, records that the average duration of the disease in 125 cases in those who had Hæmoptysis was 26.15 months, while in the same number who did not suffer from it, only 16.48 months. It is rarely directly fatal, but its diagnostic value is extreme.

Fistula in ano is also thought to exercise a favorable influence on the duration of the disease.

And here the length to which this notice has attained, admonishes us to stop; although there are many other points connected with this important subject which we would like to discuss.

For all other topics connected with Consumption we must refer our readers to the book itself, which he will find to be written in an earnest and simple style, remarkably free from indefinite phrases or technical conventionalities. R. G.

A Practical Treatise on the Diseases peculiar to Women, illustrated by cases derived from Hospital and Private Practice. By Samuel Ashwell, M. D., late Obstetric Physician and Lecturer to Guy's Hospital. Third American, from the Third and Revised London Edition. Philadelphia: Blanchard & Lea. 1855. pp. 528. For sale by J. H. Riley & Co., Columbus.

When a work has gone through two editions and received the impress of a third, it has passed beyond the bar of the reviewer. It neither fears his frowns nor needs his praises, for it has secured a higher prize in the approbation of that portion of the reading public for which it was designed. Respecting the merits of Dr. Ashwell's book, it would be superfluous therefore in us to speak. Most practitioners who have had to treat diseases incident to females, possess this work, and have been indebted at some time of their lives to the judicious advice and faithful descriptions of diseases with which it abounds.

On one or two points only must we remark. It is no disparagement to say that Dr. Ashwell is rather disposed to be cautious in recognizing "new things." He demurs to the frequency of inflammation and ulceration of the cervix uteri, as stated by Dr. Bennet, Simpson and others, and is unconvinced as to the supposed frequency of the various displacements of the Uterus, although founded upon the observations of Simpson, Protheroe Smith, Hensley, Kiwisch and many others, and as to the Uterine Sound of the former gentleman, he hazards the severe remark that it "not only detects but makes many of the supposed displacements." We cannot avoid thinking that prepossession has something to do with this conclusion in the worthy Dr.'s mind. All who have used this instrument with care must acknowledge its assistance in rendering clear a diagnosis which without it would be obscure, and its recognition long delayed, the sufferings of the patients being meanwhile prolonged. Neither should the use of such words as "spiking an organ" deter any from the use of the sound or the intra-uterine pessaries suggested by Drs. Simpson and Kiwisch in cases which clearly demand them, and in which the reposition of the displaced organ cannot be accomplished by other means. True, evils may be apprehended from their incautious use, but if we are to discard every means in which there is a bare possibility of failure or danger from our list of therapeutic appli-agents, farewell to all improvement, and all proper use of remedial ances. The possibility of the occurrence of evil must make us add to our caution, but not lead us blindly to throw away all such aid. The testimony of men like Simpson, Protheroe Smith, Kiwisch, Miller, and a host of others, "good men and true," as to their safety and utility in a large majority of cases, is sufficient authority for their careful use. Certainly they should never be employed otherwise. We have witnessed numerous cases where such agents have been required and applied, but have never chanced to see the ill effects spoken of by Dr. Ashwell.. Yet we do not deny their existence; only we insist they form the exception, not the rule.

Regarding one other particular, we wish to say a word, without knowing exactly if to Dr. Ashwell or to the American Editor (if any there be to this edition) we are to attribute the shortcomings we refer to. A work on Diseases of Females, with the date 1855 on the title page, which treats of Dropsy of the Ovary, and alludes to the operation of ovariotomy, should certainly predicate an opinion concerning the merits or demerits of that most serious operation upon the latest and fullest statistics upon the subject. Yet the list of operations performed embraces only 63, which is stated to "include the results of almost all the cases on record." The latest case in the number bears date in 1850! Dr. Bird is mentioned as operating twice, and Dr. Atlee once only, yet both these gentlemen have removed the diseased ovaries in a number of cases, and many times successfully. Other names familiar to any who have investigated the subject of "Ovariotomy" are also omitted. It may justly be a matter of congratulation, that while a leading and justly popular treatise on these subjects is thus wanting, the physicians of Ohio can easily supply the deficiency from the records of their own State Medical Society. In 1851, the committe of which Dr. Buckner was chairman, published a report on Ovarian diseases, including the results of 222 *cases of Ovariotomy, and an analysis of the same,* furnished by Dr. Atlee. Since this period the latter gentleman has published the results of 30 additional cases.

We have freely alluded to those points in which we think the work is not sufficiently brought down to the present times, because we think the great merits of the work, appreciated as well by us as by the profession at large, might possibly cause them (important as we fear they are) to be overlooked. The work of Dr. Ashwell will always maintain a high rank among the authorities upon diseases of the weaker sex. We call especial attention to the valuable article appended to this volume, "*on the morbid consequences of undue lactation,*" a comparatively new but very important matter of medical investigation.

R. G.

An Outline of Medical Chemistry for the use of Students. By B. Howard Rand, A. M., M. D., Professor of Chemistry in the Philadelphia College of Medicine, &c. Philadelphia, (for sale by Randall & Aston, Columbus,) 1855, pp. 259.

The title page of this little book very accurately designates its intention and character, and will meet the exingencies of that class of students (far too numerous we are afraid,) who depend for their information upon outlines, compounds, and such "short roads to knowledge." They will find herein as the author truly states, "such facts as are of the most importance, in such a form as to be of easy reference for service." Moreover, we have no doubt it will prove a very useful remembrancer to the advanced student in chemistry, who wishes to refresh his memory on any subject of which it treats, and to whom a glance at the leading topics, recalls the process and operations understood but not expressed in outline statements. The omission of Physiological Chemistry is by no means satisfactorily accounted for in a work purporting to treat of Medical Chemistry. While therefore we have no hesitation in recommending the book, with this exception, as a good one of its kind, we do not commit ourselves to the praise of the class to which it avowedly belongs.

R. G.

PART FOURTH.

EDITORIAL AND MISCELLANY.

Ohio State Medical Society.—We have not yet received an official copy of the Transactions of the State Society, for the present year. The annual session was held at Zanesville, on the 5th, 6th, and 7th ultimo.

The meeting, all things considered, was one of the most interesting that has ever taken place in our State. This remark does not apply in an especial manner, to the papers read, though some of these were highly creditable, and when published, will be found to be of practical utility. But it applies to a disposition which has been growing up for some time among a certain class, to throw off all written ethical restraint, and be governed in future by the spontaneous sense of propriety that may be elicited by professional intercourse. This feeling found its expression at the late meeting, in a report made by M. B. Wright, M. D., who was chairman of a special committee on ethics.

Of the origin of this feeling, and the circumstances which have fostered it, we shall say nothing. But we shall take the liberty to say, that, in our humble judgment, there is not a reason in the annals of ratiocination that can be brought to support it. That our system of ethics is perfect, no one pretends to affirm; nor that objections cannot be urged against it. But, what is there of human origin, against which objections cannot be urged. They may be urged against a *plenum* or a *vacuum*—against every thing pertaining to Nature, Art, Society, or Religion. But what of all this ? If innovators would put themselves to the trouble to take a few lessons from Blair, Duncan, Abercombie, or some other elementary writer on the subject of "*fallacies,*" they would see the *fallacy* of rejecting things merely because objections may be urged against them. In order to understand the merits of his case rightly, the innovator should consider whether there are not more and weightier objections against the course he is pursuing and its effects, than there are against the things to which he is objecting. This test, in the case before us, as well as in many others, would have the effect of classifying what is generally regarded as argument, under the head of "*The Fallacies of Objections.*"

For our system of ethics, no one claims any more than that it is a digest of the rules, that it has been supposed would be useful in governing physicians in their intercourse with each other, and with their patients. The present form of the system, is the result of the labor, not of a single individual, or of a particular class of individuals, but of the good and great of the profession, from Hippocrates to the present time. Really, every man for twenty centuries, conspicuous as a practitioner, has contributed something to it, in action or words ; and, whether it is perfect or not, has nothing to do with the necessity for its existence. It should be *improved* if deficient, not destroyed.

It was contended that the code of ethics has been inefficient in accomplishing the purposes for which it was instituted—that is, it has not made every member of the profession honest and courteous; and because it has not, it ought to be erased from the records of the profession—strange logic this! Suppose we apply it to the codes legal and religious, that have obtained in our country. Are our Constitution and Laws to be abolished because they have failed to make all good citizens? Or must we lay aside the Holy Oracles because bad men are now almost as numerous as ever?

To many of us it seems that Law and Man were made together, and are inseparable. The latter has not been permitted to exist for a moment without the restraint of the former. The most stupid novice recognizes the presence and agency of law in every movement of the physical organization; and it has been supposed that it was the peculiarity of modern civilization, to possess a code expressly adapted to the moral and social part of our composition. How futile then to be finding fault with what is as indispensable to our existence, as cohesive force to inorganic matter.

But it is thought, medical men need no such regulation. Why not? Have not they a calling, intricate and peculiar in the relations it possesses, and demanding of each other, conduct shaped in accordance with the greatest possible degree of precision? It would indeed, be strange that in their intercourse with each other, their movements should be left to the spontaneous sense of propriety which happened to be on hand at the time. Without some standard their views of right would be about as various as the statues of their different persons.

It is to be hoped that future efforts will be directed in the work of building up, instead of tearing down. The latter kind of employment, or any thing that smacks of it, looks too much like playing into the hands of the enemies,--the irregulars of every hue and shade. They have been and are now formidable enough without being strengthened by our dissensions or harmonized by our quarrels. Every move a medical man makes, involving in any manner, the future standing of the profession, should be well considered. *Cui bono* should be the uppermost question.

The State Society, meets next year in this city, and we say in advance to our friends, come one, come all.

We are under obligations to our Medical friends at Zanesville, for the very warm reception with which we were there greeted. Every thing necessary to business, and the comfort and enjoyment of members was amply provided.

NOTICE TO MEMBERS OF THE OHIO STATE MEDICAL SOCIETY.—*Members* of the Ohio State Medical Society, it may be seen, from the Medical Counsellor, will soon be called upon by the Treasurer, Dr. Crume, for the annual assessment, one dollar, levied at the late meeting at Zanesville. It is important that each member respond promptly, otherwise there will be no Transactions published for the present year. Besides, a resolution was passed at the late meeting, cutting off from membership, those who are hereafter found delinquent.

EPIDEMICS OF OHIO.—Some two years since we were appointed by the State Medical Society, Chairman of a Committee on the Epidemics of the State, with the liberty to choose such other members as we might think advisable. We have made no appointments, nor do we intend to make any. But we wish every member of the profession in the State, who has, or who may have, between now and the first of April next, any information on the subject, to regard himself as one of the committee, and communicate to us the result of his observations. We expect to make the report at the next meeting of the Society, to be held in this city, June, 1856.

We consider it unnecessary to indicate the points to which attention should be directed. Every one, of course, must be his own judge as to the method of making and detailing his observations. What we want is a thorough statement of the facts.

Address, JNO. DAWSON,
Columbus, Ohio.

NOTICE TO SUBSCRIBERS.—The present No. closes the 7th volume of the Ohio Medical and Surgical Journal, and we take the opportunity to call the attention of those *in arrears*, to the propriety of at once liquidating their accounts. Quite a number are in arrears yet for the present volume, (although our terms are in advance,) some for the present and preceding, and there are others who have received the work since its commencement, and until the present have paid nothing. Such delinquencies work injurious results in every way in which they can be contemplated. By them both parties, creditor and debtor, are made worse. While remitting for back dues, the occasion may be embraced to send the subscription for the 8th volume, which commences with the next number.

Signs of the Times, No. 2.—In a previous number of the Journal, we indulged in some reflections touching the caption at the head of this paragraph, and we propose now to extend our thoughts a little further in the same direction.

Time has been when a few individuals located at favorable points on our Continent, engrossed almost the whole of public attention as Teachers of Medical Science. They embraced the favorable opportunity while our community was in the plastic state, so far as things medical was concerned, to impress themselves in a way that inspired towards them the most unlimited confidence and veneration. Eminently worthy, their influence was complete and commanding. The Fohi of the Chinese, the Brama of the Hindoos, the Jupiter of the Greeks and Romans, or the Woden of the Scandinavians, scarcely held greater dominion over the minds of their respective communities, than did Rush, Physic, Dewces, Wistár ,etc., over the medical mind of our nation. In every sense of the word oracles, what they uttered was implicitly believed, what they commanded was faithfully obeyed. Taken altogether, they were a constellation that imparted life and light, not merely to the Atlantic slope, but to the length and breadth of the Basin of the Mississippi. Such gifts, however, to humanity, cannot continue forever! By an edict that embraced the brightest genius with the ephemeral insect of the rose leaf, they have passed away, and we now feel very fully the force of the maxim: *Tempora mutantur et nos mutamur in illis*—times change and we change with them. With new times we have new men, all differing very widely from what obtained in the period to which we have alluded. In our day, among other things, we find a greater admixture in the community, of doubt, skepticism and sophistical reasoning. One tenth part, and in some instances more, of many communities have reeled from the perpendicular of common sense and science, and slid off into the dominion of systems founded on fancy, ignorance, avarice, and fraud. With such circumstances we have also some difference in the intellectual stock of those that now occupy the place of the former savans. This does not concern the amount so much perhaps, as the kind, quality, etc. Many departments hitherto but little, if at all cultivated, now rank as of primary importance, while accuracy in every thing has very much increased. There is another point of comparison between the two classes that cannot have escaped notice. We allude to the relative standing of each before the medical community. As already remarked, those of a former day possessed not only unlimited confidence, but were almost deified, while those who occupy their places are regarded merely as a part of the great body of teachers spread over the territory of almost a score of States, that extend from Maine to Louisiana. At all these various points, the native soil has seemed to be prolific in the material for making Teachers, and as a consequence the growth, although in many instances rapid, has been sufficiently tall and commanding not only to excite admiration, but to invite under its shade, a very large proportion of those who wish to do service at the feet of Æsculapius. To drop the figure, we do not intend to assert that all the colleges which have sprung up are demanded by the wants of the times; or that this, that, or the other one must ultimately be the great "medical centre" of the continent. Nor do we intend to suggest that those engaged in teaching in this, that, or the other school must necessarily take precedence. Such suggestions we have always regarded as invidious, unnecessary. At the same time no one should try to ignore the fact that the spell in regard to the sufficiency of eastern men and eastern schools has been broken, or rather that it has spontaneously evaporated. As the States North, South, and West have been developed, the propriety of providing for medical education, has shared largely of public attention, as being among the requirements indispensable to well organized communities. Colleges have been reared, facilities provided, and Faculties organized. These institutions in the past have been patronized, in the future this must increase, and the time is not far distant when the larger States will regard it as being as incumbent upon them to provide the necessary means for a medical, as for a literary education.

The States in the Mississippi Valley differ from those on the Atlantic slope, in geography, geology, topography, hydrology, mineralogy, and many other circumstances connected with etiology; and and as a consequence with the application of drugs to the cure of disease. While many of the elementary principles of a Medical Education, would be the same whether taught in France or Italy, no one wonld expect to learn in the former country, as well as he could in the latter, the best methods of treating the diseases of the Pontine Marshes.

Nor can any more be expected from educating young men in the Eastern Colleges who are designed for the practice of their profession in many of the Western and Southern States. What do those engaged in teaching in New York or Philadelphia know of "sinking chills," yellow fever, or the lesions that result from the union of malaria with cholera? What do they know also of the great variety of other ailments inseparably connected with the overflowing of our great rivers; and the deep beds of loam that so universally abounds in the Interior Valley, ever varying in its chemical composition and consequently in its influence upon the community? To all such questions the answers would be—they know but little, except what they have learned from books and periodicals, written by those living in the regions. An individual that has been engaged in expounding practical medicine for thirty years in Eastern schools, informed me, a few months since, that he had never crossed the Allegheny Mountains. The knowledge then of such individuals, in regard to the great staple diseases, endemics and epidemics of our country, being of a second hand character, any effort that it is possible for them to make, to communicate correct information must fall very far short of what might be done in this way by those living here, and having had the benefit of ample personal experience.

Facts accordingly transpire, that lend still more importance to the views expressed. From New England it has been and still is the practice of physicians educated among the granite hills, to immigrate to Western and Southern States, in order to practice their profession. All such will bear their testimony to their imperfect efforts at first, to understand and treat the diseases and forms of disease peculiar to their new location. Cartwright, the talented Southerner, although for a long time a very able practitioner in one of the cities near the delta of the Mississippi, felt it to be a duty that he owed to humanity, on removing to New Orleans, to go into one of her hospitals, and spend a year in investigating the character of the diseases peculiar to the locality, before offering himself as a candidate for city patronage. Now those educated in the East, on coming West and South, will find it to their advantage to adopt something of a similar course, otherwise they may find themselves in the condition, after practising a while, of Delpech, who said that he had spoiled a hat full of eyes before he learned to operate on the eye for cataract.

Receipts for the Journal.—The following are the receipts for the Journal not otherwise acknowledged:

Of Wm. Hooper, $2; J. D. Airey, $2; Wm. M. Landon, $2; L. Woodruff, $2; G. Eells, $3; M. L. Wyeth, $2; Isaac Huestis, $2; Leman Galphin, $2; S. S. Scoville, $2; C. A. Tremble, $2; J. H. Braine, $3; M. Tompkins, $4; J. W. Cameron, $2; — Dalford, $2; A. C. Moore, $4; J. G. Detzler, $2; Geo. Cook, $1; Thomas W. Bradley, $2; J. & T. Foster, $2; Wm. Judkins, $3; S. Parker $2; A. D. Wetherell; $2; J. W. Scott, $2; Joseph Rogers, $5; J. T. Heldreth, $1; E. Ranger, $2; A. J. Beach, $2; J. W. Hurst, $2; N. Green, $2; L. S. Ginhart, $2; P. M. Crume, $1; H. Culbertson, $2; Wm. Bell, $2; J. Campbell, $2; W. H. Reeves, $3; Wm. H. Jameson, $4; J. W. Watt, $2; J. A. Carothers, $6; C. F. Gibbs, $2; J. H. Corwine, $2; L. Holland, $3; M. A. Chapman, $2; J. M. Snodgrass, $2.

We had reviewed at some length that very interesting work, Hayward's Surgical Reports, and Brynes' Essay on the Contagiousness of Cholera, for this number of the Journal. They are unfortunately crowded out by the press of other matter, and must therefore be deferred until our next issue.

We have received several pamphlets from the authors, but can only acknowledge their receipt at present, and shall take an early occasion to notice them more fully:

Pustule Maligne, an Inaugural Essay by Daniel W. Wainwright, M. D. New York: Billen & Brothers. 1855.

Lectures on Ulceration of Os Uteri, in reply to Dr. West's Croonian Lectures, by Henry Miller, M. D. Louisville: Brennan. 1855.

Cases of Wounds of the Heart, by Dr. Purple. New York.

Polypi of the Womb, by Dr. Channing. Boston: Clapp. 1855.

We have received a beautifully lithographed portrait of Mr. Fergusson, of King's College, London, the celebrated surgeon. Those who have seen Mr. Fergusson with his cheerful face in the operating theatre, waiting to perform one of the larger operations for which he is so celebrated, while the patient perhaps is being anæsthetized, and looking the least concerned man in the crowded room, will recognize the expression of his countenance, which the artist has faithfully transferred to the portrait before us. Those desirous of possessing the lineaments of this celebrated Surgeon and Surgical writer can obtain them from Otto Knirsch, New York.

We have also received with the June No. of the Buffalo Medical Journal, an admirable likeness in lithograph of Dr. Austin Flint, who has just retired from the editorial chair of that Joural. We understand the engraving to have been made and presented as a token of esteem from the physicians of Buffalo. Such transactions are creditable alike to him whose talents and energy have won such a recognition from his colleagues, and to those who have shown themselves magnanimous enough to recognize and extend a reputation acquired in their midst. The portrait is sent to all the subscribers of the present volume of that Journal. R. G.

OBITUARY.

We regret to announce the death of our young and esteemed friend, Dr. Apperson, of Bloomfield, Illinois, on the 13th of April last, of a congestive chill, after an illness of only twenty-four hours. The last time Dr. Apperson's name appeared in the pages of this Journal, it was among the graduates of Starling Medical College, in March last, and remembering the talents and assiduity he displayed as a pupil, we had hoped that long years of usefulness and honor were before him in the arduous though glorious profession upon which he had but just entered. Comparatively but a few days have since elapsed, and the destroyer claimed him. Such is life—in its midst—at its very outset—we are in death.

The British and Foreign Medico Chirurgical Review has been transferred to the editorial care of Dr. Sieveking, well known in this country as one of the authors of a new work on "Pathological Anatomy." Dr. Parkes, the former editor, has been appointed Superintendent of the English Civil Hospital in the East.

The New Orleans Medical and Surgical Journal will be edited by Dr. Bennet Dowler, of New Orleans, the distinguished Physiologist.

Western Lancet.—Dr. Lawson has retired from this Journal, and is succeeded by Dr. Thos. Wood, assisted by several medical gentlemen of Cincinnati.

The Buffalo Medical Journal passes from the editorial care of Drs. Flint & Hunt, to the sole charge of Dr. Hunt.

Dr. H. H. Smith succeeds Dr. Gibson as Professor of Surgery in the University of Pennsylvania. Dr. Smith was elected by a vote of 11 Trustees, to 9 in favor of Dr. Brainerd, of Chicago, one vote having been cast blank. Considering that Dr. Brainerd lives so far from Philadelphia, in the non-classic "West," this vote must be highly gratifying to him, as a recognition of his extended reputation. The New Jersey Medical Reporter asserts that Dr. Brainerd was the choice of a majority of the Faculty.

Dr. Horace Green has resigned the Professorship of Theory and Practice in the New York College, but will lecture on Diseases of the Thoracic Organs. Dr. Cox has been appointed to the vacant chair.

Drs. Channing and Bigelow have resigned their Professorships at Harvard University, Boston, and are succeeded by Dr. Storer in the chair of Obstetrics, Dr. Clarke in that of Materia Medica, and Dr. Shattuck as Lecturer on Clinical Medicine.

In the Virginia Medical College, the chair of Physiology, vacated by the resignation of Dr. Brown Sequard, who returns to France, is filled by Dr. Joyne, of Virginia. Dr. Petticolas is appointed Professor of Anatomy.

Dr. S. Loving has been appointed Demonstrator of Anatomy in Starling Medical College, in this city.

Erratum.—The following error unfortunately crept into Dr. Wormly's valuable article in this No., notwithstanding the greatest care on the part of all concerned : On page 462—12th line from the bottom—for 134 : : .369 : .688, read 134 : : .359 : .668.

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